K - Ephemeridas
[1767-18
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14.2.d

THE

NAUTICAL ALMANAC

AND

ASTRONOMICAL EPHEMERIS,

FOR THE YEAR 1767.

Publiſhed by ORDER of the

COMMISSIONERS OF LONGITUDE.

LONDON:
Printed by W. RICHARDSON and S. CLARK,
PRINTERS;
AND SOLD BY
J. NOURSE, in the Strand, and Meſſ. MOUNT and PAGE,
on Tower-Hill,
Bookſellers to the ſaid COMMISSIONERS.
M DCC LXVI.

EXTRACT from the late Act of Parliament concerning the Longitude, made in the Fifth Year of the Reign of his preſent Majeſty.

WHEREAS the Publication of Nautical Almanacks conſtructed by proper Perſons, under the Direction of the ſaid Commiſſioners, would greatly contribute to make the ſaid Lunar Tables more generally uſeful; Be it further Enacted, by the Authority aforeſaid, That it ſhall and may be lawful to and for the ſaid Commiſſioners to cauſe ſuch Nautical Almanacks, or other uſeful Tables, to be conſtructed, and to print, publiſh, and vend, or cauſe to be printed, publiſhed, and vended, any Nautical Almanack, or Almanacks, or other uſeful Table or Tables, which they, or the major Part of them, ſhall, from time to time, judge neceſſary and uſeful, in order to facilitate the Method of diſcovering the Longitude at Sea; any Law, Statute, excluſive Privilege, private Charter, or other Cuſtom, to the contrary thereof notwithſtanding.

And be it Enacted by the Authority aforeſaid, That no Perſon or Perſons ſhall print, publiſh, or vend, or cauſe to be printed, publiſhed, or vended, any Nautical Almanack or Almanacks, or other Table or Tables conſtructed under the Direction of the ſaid Commiſſioners, without being firſt licenſed by the ſaid Commiſſioners, or the major Part of them: And if any Perſon or Perſons not ſo licenſed, or not being authorized by the Perſon or Perſons ſo licenſed by the ſaid Commiſſioners, ſhall print, publiſh, or vend, or cauſe to be printed, publiſhed, or vended, any ſuch Nautical Almanack or Almanacks, or other Table or Tables, every ſuch Perſon or Perſons ſhall, for every Copy of ſuch Nautical Almanack or Table ſo printed, publiſhed, or vended, forfeit and pay the Sum of Twenty Pounds; to be recovered by Action of Debt, Bill, Plaint, or Information, in any of his Majeſty's Courts of Record at *Weſtminſter*; and that One Moiety of ſuch Penalty and Forfeiture ſhall be to his Majeſty, his Heirs and Succeſſors, and the other Moiety to him or them that ſhall proſecute, inform, or ſue for the ſame.

MVSEVM BRITANNICVM

By the COMMISSIONERS appointed by Acts of Parliament for the Diſcovery of the Longitude at Sea, and for examining, trying, and judging of all Propoſals, Experiments, and Improvements relating to the ſame.

WHEREAS we have employed proper Perſons to compute a Nautical Almanac and Aſtronomical Ephemeris for the Year 1767, which will greatly contribute to make the Lunar Tables conſtructed by the late Profeſſor MAYER of *Goetingen* (which you have already printed with our Authority) more generally uſeful; and whereas we think fit to employ you to print the ſaid Nautical Almanac and Aſtronomical Ephemeris: We do therefore, in purſuance of the Power veſted in us by Act of Parliament, hereby licenſe, authorize, and impower you to cauſe the ſame to be printed, together with ſuch other uſeful Tables for facilitating the Method of diſcovering the Longitude at Sea, as ſhall have been conſtructed under our Direction, and will be delivered to you by the Reverend Mr. NEVIL MASKELYNE, his Majeſty's Aſtronomer Royal at *Greenwich*; and for ſo doing this ſhall be your ſufficient Warrant. Given under our Hands and Seals this 26th of *April* 1766.

EGMONT (L.S.)
JOHN CUST (L.S.)
HOWE (L.S.)
HEN. OSBORN (L.S.)
ED. HAWKE (L.S.)
CH. KNOWLES (L.S.)
JOHN FORBES (L.S.)
MORTON (L.S.)
N. MASKELYNE (L.S.)
T. HORNSBY (L.S.)
A. SHEPHERD (L.S.)
E. WARING (L.S.)
G. B. RODNEY (L.S.)
T. SALUSBURY (L.S.)
P. STEPHENS (L.S.)
G. COKBURNE (L.S.)
R. LONG (L.S.)

To Meſſ. WILLIAM
RICHARDSON and
SAMUEL CLARK,
Printers in *Saliſbury-court*, *Fleet-ſtreet.*

By Command of the Commiſſioners,
JOHN IBBETSON, Secretary.

By the COMMISSIONERS appointed by Acts of Parliament for the Diſcovery of the Longitude at Sea, and for examining, trying, and judging of all Propoſals, Experiments, and Improvements relating to the ſame.

WHEREAS we think fit to employ you to publiſh and vend, and to cauſe to be publiſhed and vended, the Nautical Almanac and Aſtronomical Ephemeris for the Year 1767, together with other uſeful Tables (conſtructed under our Direction) for facilitating the Method of diſcovering the Longitude at Sea, which will be printed by Meſſieurs RICHARDSON and CLARK of *Saliſbury-court*, *Fleet-ſtreet*: We do therefore, in purſuance of the Power veſted in us by Act of Parliament, hereby licenſe, authorize, and impower you to publiſh and vend, and to cauſe to be publiſhed and vended, the ſaid Nautical Almanac and Aſtronomical Ephemeris, together with the other uſeful Tables above-mentioned. For which this ſhall be your ſufficient Warrant. Given under our Hands and Seals this 26th of *April* 1766.

EGMONT (L.S.)
JOHN CUST (L.S.)
HOWE (L.S.)
HEN. OSBORN (L.S.)
ED. HAWKE (L.S.)
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T. SALUSBURY (L.S.)
PH. STEPHENS (L.S.)
G. COKBURNE (L.S.)
R. LONG (L.S.)

To Mr. JOHN NOURSE,
Bookſeller in the *Strand*.

By Command of the Commiſſioners,
JOHN IBBETSON, Secretary.

☞ A Licence was alſo granted to the like Effect to Meſſ. JOHN MOUNT and THOMAS PAGE, Stationers on *Tower-hill*.

PREFACE.

THE Commiſſioners of Longitude, in purſuance of the Powers veſted in them by a late Act of Parliament, preſent the Publick with the NAUTICAL ALMANAC and ASTRONOMICAL EPHEMERIS for the Year 1767, to be continued annually; a Work which muſt greatly contribute to the Improvement of Aſtronomy, Geography, and Navigation. This EPHEMERIS contains every Thing eſſential to general Uſe that is to be found in any Ephemeris hitherto publiſhed, with many other uſeful and intereſting Particulars never yet offered to the Publick in any Work of this Kind. The Tables of the Moon had been brought by the late Profeſſor MAYER of Gottingen to a ſufficient Exactneſs to determine the Longitude at Sea, within a Degree, as appeared by the Trials of ſeveral Perſons who made Uſe of them. The Difficulty and Length of the neceſſary Calculations ſeemed the only Obſtacles to hinder them from becoming of general Uſe: To remove which this EPHEMERIS was made; the Mariner being hereby relieved from the Neceſſity of calculating the Moon's Place from the Tables, and afterwards computing the Diſtance to Seconds by Logarithms, which are the principal and only very delicate Part of the Calculus; ſo that the finding the Longitude by the

the Help of the EPHEMERIS is now in a Manner reduced to the Computation of the Time, an Operation equal to that of an Azimuth, and the Correction of the Diſtance on account of Refraction and Parallax, which is alſo rendered very eaſy by either of the Two Methods invented by Mr. LYONS and Mr. DUNTHORNE, and publiſhed among the Tables requiſite to be uſed with the EPHEMERIS.

By Deſire of the Commiſſioners of Longitude I drew up the Explanation and Uſe of the Articles contained in the EPHEMERIS, and the Inſtructions, with Examples, for finding the Longitude at Sea by the Help of the ſame. I alſo collected and calculated the Sixteen Firſt Pages of Tables requiſite to be uſed with the EPHEMERIS, and computed the Table of proportional Logarithms, which ſeemed to me abſolutely neceſſary to clear this Method of any remaining Difficulty; and added Explanations of all the Tables, and a Correction, p. 49 and 50, which may be applied by the Curious to the Effect of Refraction on the Moon's Diſtance from a Star, found by Mr. LYONS, or any other Method, on account of the Barometer and Thermometer.

All the Calculations of the EPHEMERIS relating to the Sun and Moon were made from Mr. MAYER's laſt manuſcript Tables, received by the Board of Longitude after his Deceaſe, which have been printed under my Inſpection, and will be publiſhed ſhortly. The Calculations of the Planets were made from Dr. HALLEY's Tables; and thoſe of the Eclipſes of Jupiter's Satellites from the Tables of Mr. WARGENTIN, publiſhed by M. DE LA LANDE in 1759, except thoſe of the Fourth Satellite,

lite, which were calculated from the Tables of the ſame further improved by Mr. WARGENTIN, and publiſhed alſo by M. DE LA LANDE in the CONNOISSANCE DES MOUVEMENTS CELESTES of 1766.

All the Articles of the EPHEMERIS were computed by Two ſeparate Perſons, and examined by a Third, except the Moon's Longitude, Latitude, Right Aſcenſion, Declination, Semidiameter, and Parallax, which, for Noon, were computed by One Perſon, and for Midnight by another, and the Truth of theſe Calculations aſcertained by means of Differences, which, for the Moon's Longitude, were carried as far as the Fourth Order.

NEVIL MASKELYNE,
ASTRONOMER ROYAL.

EXPLANATION of the Characters uſed in the EPHEMERIS.

The PLANETS, &c.

☉ The Sun.
☽ The Moon.
☿ Mercury.
♀ Venus.
♂ Mars.
♃ Jupiter.
♄ Saturn.
☊ The Moon's, or any other Planet's Aſcending Node.
☋ The Deſcending Node.
☌ Conjunction, or Planets ſituated in the ſame Longitude.
☍ Oppoſition, or Planets ſituated in oppoſite Longitudes, or differing 6 Signs from each other.

Signs of the Zodiac.

♈ Aries.
♉ Taurus.
♊ Gemini.
♋ Cancer.
♌ Leo.
♍ Virgo.
♎ Libra.
♏ Scorpio.
♐ Sagittarius.
♑ Capricornus.
♒ Aquarius.
♓ Piſces.

ECLIPSES of the YEAR 1767.

Jan. 29. ☉ eclipſed, inviſible in Europe. ☌ at 15^{h}. 43′. in 10^{s}. 10°. 8′. with 1′. North Latitude.

July 25. ☉ eclipſed, begins at Sun-riſing in Lat. S. 19°. 16′. Long. 141°. 45′. W. Ends at Sun-ſetting in Lat. 3°. 23′. S. Long. 60°. 5′. Weſt. Centrally eclipſed on the Merid. in Lat. 1°. 15′. South.

	Obliquity of Ecliptic. ° ′ ″	Equat. of Equinoct. Points. ″
Jan. 1.	23. 28. 17,2	+13,5
Apr. 1.	23. 28. 16,7	+14,5
July 1.	23. 28. 16,0	+15,3
Oct. 1.	23. 28. 15,2	+16,0
Dec. 31.	23. 28. 14,4	+16,6

JANUARY 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Th.	Circumciſion.
2	F.	
3	Sa.	
4	*Su.*	*2d. Sun. after Chriſtmas.*
5	M.	
6	Tu.	Epiphany.
7	W.	
8	Th.	Lucian.
9	F.	
10	Sa.	
11	*Su.*	*1ſt. Sun. after Epiphany.*
12	M.	
13	Tu	Hil. Cam. Term begins.
14	W.	Oxford Term begins.
15	Th.	
16	F.	
17	Sa.	[Q.'s Birth-day kept.
18	*Su.*	*2d. Sun. after Epiphany.*
19	M.	[Hilary, 1 ret.
20	Tu.	Fabian. In 8 days of St.
21	W.	Agnes.
22	Th.	Vincent.
23	F.	Hilary Term begins.
24	Sa.	*[verſ. of St. Paul.*
25	*Su.*	*3d. Su. after Epiph. Con-*
26	M.	
27	Tu.	From St. Hilary in 15
28	W.	[days, 2 ret.
29	Th.	
30	F.	K. Charles I. Martyr.
31	Sa.	

Phaſes of the Moon.

	D.	H.	′
Firſt Quarter —	6.	20.	23
Full Moon ——	14.	12.	40
Laſt Quarter ——	22.	17.	39
New Moon ——	29.	15.	43

Other Phenomena.

D.
1. ☿ μ ♐ diff. Lat. 50′.
3. ☾ θ ♒ 13^{h}. 12′.
5. ☾ λ ♓ 3^{h}. 55′.
7. ♃ Station. approaches to β ♍, but does not come to ☌ with it.
9. ☾ η Pleiadum 20^{h}.22′.
10. ☾ χ ♉ 11^{h}. 33′.
11. ☾ β ♉ 15^{h}. 7′.
13. ☾ ε ♊ 0^{h}. 46′.
14. ♄ ι ♉ diff. Lat. 18′.
15. ☾ δ ♋ 10^{h}. 12′.
16. ♂ ε ♓ diff. Lat. 50′.
19. ☾ υ ♌ 8^{h}. 11′.
☉ ente[illegible] at 16^{h}. 30′.
♂ ζ ♓ diff. Lat. 30′.
24. ☾ ϖ ♏, 18^{h}. 43′.
25. ☾ σ ♏, 3^{h}. 22′.
☾ α ♏, 6^{h} 48′.
27. ☾ λ ♐ 4^{h}. 1′.
☾ φ ♐ 10^{h}. 22′.
☾ σ ♐ 14^{h}. 0′.
29. ☉ eclipſed inviſible in Europe.
☌ 15^{h}. 43′. in 10^{s}. 10°. 8′.
☾ Lat. 1′ North.

JANUARY 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. South.	Equat. of Time Add.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Th.	9. 10. 57. 44	18. 47. 42	23. 1. 6	4. 7	28
2	F.	9. 11. 58. 56	18. 52. 7	22. 55. 50	4. 35	28
3	Sa.	9. 13. 0. 8	18. 56. 31	22. 50. 6	5. 3	27
4	Su.	9. 14. 1. 20	19. 0. 55	22. 43. 56	5. 30	27
5	M.	9. 15. 2. 32	19. 5. 19	22. 37. 18	5. 57	26
6	Tu.	9. 16. 3. 43	19. 9. 42	22. 30. 13	6. 23	27
7	W.	9. 17. 4. 53	19. 14. 5	22. 22. 42	6. 50	25
8	Th.	9. 18. 6. 2	19. 18. 27	22. 14. 45	7. 15	26
9	F.	9. 19. 7. 11	19. 22. 49	22. 6. 21	7. 41	24
10	Sa.	9. 20. 8. 20	19. 27. 10	21. 57. 32	8. 5	24
11	Su.	9. 21. 9. 26	19. 31. 30	21. 48. 17	8. 29	24
12	M.	9. 22. 10. 34	19. 35. 50	21. 38. 36	8. 53	22
13	Tu.	9. 23. 11. 40	19. 40. 9	21. 28. 31	9. 15	22
14	W.	9. 24. 12. 45	19. 44. 27	21. 18. 1	9. 37	21
15	Th.	9. 25. 13. 49	19. 48. 46	21. 7. 6	9. 58	21
16	F.	9. 26. 14. 54	19. 53. 3	20. 55. 47	10. 19	20
17	Sa.	9. 27. 15. 57	19. 57. 19	20. 44. 4	10. 39	19
18	Su.	9. 28. 17. 0	20. 1. 35	20. 31. 58	10. 58	18
19	M.	9. 29. 18. 2	20. 5. 50	20. 19. 28	11. 16	18
20	Tu.	10. 0. 19. 4	20. 10. 4	20. 6. 35	11. 34	17
21	W.	10. 1. 20. 5	20. 14. 18	19. 53. 20	11. 51	16
22	Th.	10. 2. 21. 6	20. 18. 30	19. 39. 43	12. 7	16
23	F.	10. 3. 22. 6	20. 22. 43	19. 25. 43	12. 23	15
24	Sa.	10. 4. 23. 6	20. 26. 54	19. 11. 22	12. 38	14
25	Su.	10. 5. 24. 5	20. 31. 5	18. 56. 40	12. 52	13
26	M.	10. 6. 25. 4	20. 35. 14	18. 41. 37	13. 5	12
27	Tu.	10. 7. 26. 2	20. 39. 23	18. 26. 14	13. 17	12
28	W.	10. 8. 26. 58	20. 43. 31	18. 10. 31	13. 29	10
29	Th.	10. 9. 27. 54	20. 47. 39	17. 54. 28	13. 39	10
30	F.	10. 10. 28. 49	20. 51. 45	17. 38. 6	13. 49	9
31	Sa.	10. 11. 29. 43	20. 55. 51	17. 21. 25	13. 58	8

JANUARY 1767.

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	16. 19, 2	1. 10, 8	2. 32, 9	9,992665	10. 11. 28
7	16. 19, 1	1. 10, 6	2. 32, 8	9,992717	10. 11. 9
13	16. 18, 8	1. 10, 2	2. 32, 7	9,992847	10. 10. 50
19	16. 18, 2	1. 9, 6	2. 32, 6	9,993078	10. 10. 31
25	16. 17, 5	1. 9, 0	2. 32, 3	9,993401	10. 10. 12

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Immerſions.

D.	h ′ ″
1	20. 56. 15
3	15*23. 50
5	9. 51. 27
7	4. 19. 4
8	22. 46. 44
10	17* 14. 22
12	11*42. 8
14	6. 9. 50
16	0. 37. 38
17	19* 5. 29
19	13*33. 22
21	8. 1. 17
23	2. 29. 13
24	20. 57. 12
26	15*25. 15
28	9*53. 19
30	4. 21. 28
31	22. 49. 39

II. Satellite. Immerſions.

D.	h ′ ″
1	0. 8. 34
4	13*23. 22
8	2. 38. 13
11	15*53. 13
15	5. 8. 23
18	18*23. 39
22	7. 39. 9
25	20. 54. 50
29	10*10. 41

III. Satellite.

D.	h ′ ″
4	15*22. 47 I.
4	18*40. 20 E.
11	19. 17. 36 I.
11	22. 34. 21 E.
18	23. 12. 56 I.
19	2. 28. 57 E.
26	3. 8. 53 I.
26	6. 24. 11 E.

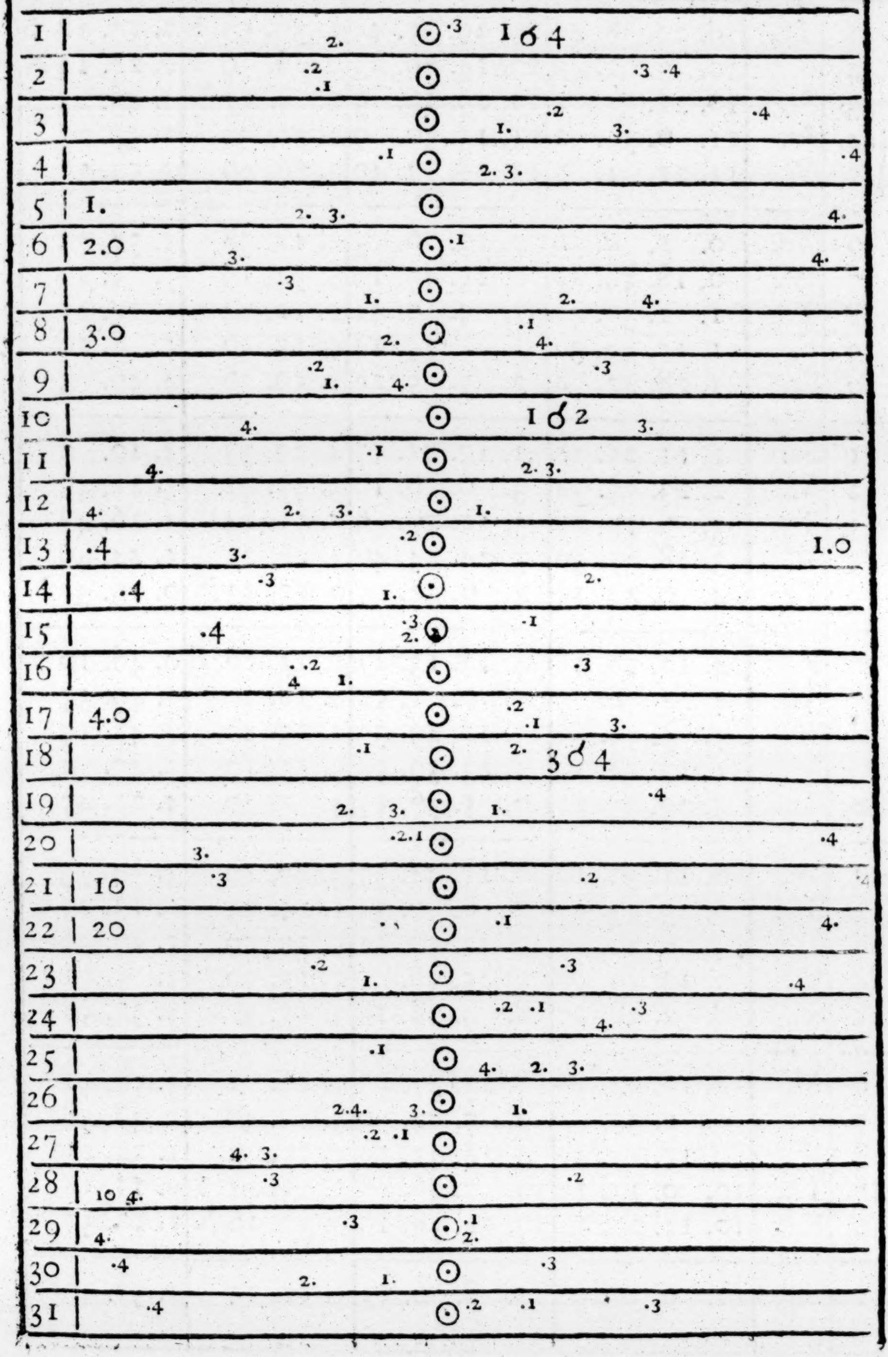
IV. Satellite.

D.	H. ′ ″
8	17*15. 59 I.
8	21. 14. 19 E.
25	11* 7. 4 I.
25	15* 0. 48 E.

JANUARY 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	s ° '	° '	s ° '	° '	° '	h '
			MERCURY.		greateſt Elong. 19^{d}.	
1	4. 2. 53	6. 49 N	9. 0. 54	3. 12 N	20. 16 S	23. 10
7	5. 3. 58	6. 38	8. 27. 39	3. 2	20. 25	22. 32
13	5. 29. 42	5. 2	8. 29. 46	2. 11	21. 17	22. 18
19	6. 21. 14	2. 54	9. 4. 57	1. 12	22. 10	22. 15
25	7. 10. 4	0. 41	9. 11. 50	0. 17	22. 40	22. 22
			VENUS.		ſup. ☌ 9^{d}. 12^{h}.	
1	9. 6. 11	1. 15 S	9. 8. 55	0. 32 S	23. 42 S	23. 52
7	9. 15. 40	1. 45	9. 16. 28	0. 45	23. 12	23. 59
13	9. 25. 9	2. 12	9. 24. 1	0. 56	22. 15	0. 4
19	10. 4. 38	2. 36	10. 1. 34	1. 6	20. 55	0. 10
25	10. 14. 8	2. 55	10. 9. 7	1. 15	19. 12	0. 16
			MARS.			
1	1. 16. 32	0. 3 S	0. 5. 0	0. 4 S	1. 56 N	5. 29
7	1. 19. 52	0. 3 N	0. 8. 49	0. 4 N	3. 34	5. 17
13	1. 23. 9	0. 10	0. 12. 40	0. 11	5. 11	5. 5
19	1. 26. 25	0. 16	0. 16. 33	0. 18	6. 47	4. 54
25	1. 29. 38	0. 22	0. 20. 26	0. 23	8. 21	4. 43
			JUPITER.			
1	5. 13. 1	1. 11 N	5. 22. 57	1. 16 N	3. 59 N	16. 45
7	5. 13. 28	1. 12	5. 23. 1	1. 19	3. 59	16. 19
13	5. 13. 56	1. 12	5. 22. 57	1. 20	4. 2	15. 53
19	5. 14. 23	1. 12	5. 22. 47	1. 22	4. 8	15. 26
25	5. 14. 51	1. 13	5. 22. 30	1. 24	4. 16	15. 1
			SATURN.			
1	2. 17. 0	1. 25 S	2. 14. 11	1. 34 S	20. 58 N	10. 3
7	2. 17. 13	1. 24	2. 13. 47	1. 33	20. 57	9. 38
13	2. 17. 27	1. 24	2. 13. 27	1. 32	20. 55	9. 11
19	2. 17. 40	1. 23	2. 13. 9	1. 31	20. 55	8. 43
25	2. 17. 54	1. 23	2. 12. 55	1. 29	20. 54	8. 17

Configurations of the SATELLITES of JUPITER at 11 o'th' Clock in the Evening.



JANUARY 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		h ° ′ ″	s ° ′ ″	° ′ ″	° ′ ″
1	Th.	9. 22. 8. 44	9. 29. 35. 44	1. 36. 58 S	0. 57. 18 S
2	F.	10. 7. 2. 58	10. 14. 29. 23	0. 16. 39 S	0. 24. 14 N
3	Sa.	10. 21. 54. 2	10. 29. 16. 9	1. 4. 37 N	1. 43. 41
4	Su.	11. 6. 35. 2	11. 13. 50. 9	2. 20. 49	2. 55. 21
5	M.	11. 21. 1. 7	11. 28. 7. 40	3. 26. 49	3. 54. 36
6	Tu.	0. 5. 9. 39	0. 12. 6. 53	4. 18. 38	4. 38. 33
7	W.	0. 18. 59. 25	0. 25. 47. 19	4. 54. 19	5. 5. 40
8	Th.	1. 2, 30. 43	1. 9. 9. 42	5. 12. 44	5. 15. 25
9	F.	1. 15. 44. 30	1. 22. 15. 14	5. 13. 56	5. 8. 26
10	Sa.	1. 28. 42. 8	2. 5. 5. 25	4. 59. 6	4. 46. 3
11	Su.	2. 11. 25. 18	2. 17. 41. 57	4. 29. 37	4. 10. 2
12	M.	2. 23. 55. 34	3. 0. 6. 19	3. 47. 42	3. 22. 47
13	Tu.	3. 6. 14. 26	3. 12. 20. 6	2. 55. 44	2. 26. 48
14	W.	3. 18. 23. 30	3. 24. 24. 49	1. 56. 22	1. 24. 46
15	Th.	4. 0. 24. 15	4. 6. 22. 5	0. 52. 23 N	0. 19. 35 N
16	F.	4. 12. 18. 28	4. 18. 13. 43	0. 13. 26 S	0. 46. 10 S
17	Sa.	4. 24. 8. 4	5. 0. 1. 54	1. 18. 20	1. 49. 35
18	Su.	5. 5. 55. 36	5. 11. 49. 32	2. 19. 40	2. 48. 17
19	M.	5. 17. 44. 10	5. 23. 39. 57	3. 15. 10	3. 40. 2
20	Tu.	5. 29. 37. 21	6. 5. 36. 55	4. 2. 40	4. 22. 47
21	W.	6. 11. 39. 10	6. 17. 44. 37	4. 40. 10	4. 54. 33
22	Th.	6. 23. 53. 53	7. 0. 7. 34	5. 5. 43	5. 13. 25
23	F.	7. 6. 26. 9	7. 12. 50. 11	5. 17. 29	5. 17. 39
24	Sa.	7. 19. 19. 58	7. 25. 56. 5	5. 13. 50	5. 5. 52
25	Su.	8. 2. 38. 47	8. 9. 28. 18	4. 53. 38	4. 36. 58
26	M.	8. 16. 24. 38	8. 23. 27. 57	4. 16. 1	3. 50. 51
27	Tu.	9. 0. 37. 50	9. 7. 54. 0	3. 21. 48	2. 48. 58
28	W.	9. 15. 15. 47	9. 22. 42. 30	2. 13. 2	1. 34. 20
29	Th.	10. 0. 13. 15	10. 7. 46. 56	0. 53. 44 S	0. 11. 54 S
30	F.	10. 15. 22. 21	10. 22. 58. 19	0. 30. 16 N	1. 11. 57 N
31	Sa.	11. 0. 33. 36	11. 8. 6. 53	1. 52. 23	2. 30. 40

JANUARY 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽ Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			h ′	° ′	° ′	° ′	° ′
1	Th.	2	0. 51	294. 12	301. 59	23. 14 S	21. 10 S
2	F.	3	1. 50	309. 33	316. 50	18. 48	16. 6
3	Sa.	4	2. 45	323. 55	330. 48	13. 13	10. 8
4	Su.	5	3. 36	337. 29	343. 59	6. 57	3. 40 S
5	M.	6	4. 25	350. 25	356. 44	0. 24 S	2. 52 N
6	Tu.	7	5. 12	3. 1	9. 18	6. 0 N	9. 4
7	W.	8	6. 0	15. 38	22. 0	11. 58	14. 42
8	Th.	9	6. 49	28. 25	34. 59	17. 14	19. 30
9	F.	10	7. 39	41. 38	48. 24	21. 32	23. 22
10	Sa.	11	8. 32	55. 15	62. 12	24. 44	25. 54
11	Su.	12	9. 25	69. 12	76. 13	26. 38	27. 0
12	M.	13	10. 18	83. 11	90. 7	27. 7	26. 51
13	Tu.	14	11. 10	96. 59	103. 40	26. 15	25. 20
14	W.	15	11. 59	110. 13	116. 37	24. 7	22. 39
15	Th.	16	12. 45	122. 48	128. 50	20. 56	19. 3
16	F.	17	13: 28	134. 42	140. 26	16. 55	14. 39
17	Sa.	18	14. 11	146. 0	151. 29	12. 16	9. 46
18	Su.	19	14. 49	156. 51	162. 10	7. 12	4. 32 N
19	M.	20	15. 28	167. 27	172. 44	1. 51 N	0. 52 S
20	Tu.	21	16. 8	178. 3	183. 25	3. 33 S	6. 15
21	W.	22	16. 49	188. 53	194. 27	8. 54	11. 30
22	Th.	23	17. 34	200. 11	206. 7	14. 0	16. 25
23	F.	24	18. 22	212. 16	218. 40	18. 40	20. 45
24	Sa.	25	19. 14	225. 20	232. 17	22. 37	24. 12
25	Su.	26	20. 14	239. 30	247. 1	25. 31	26. 27
26	M.	27	21. 16	254. 44	262. 40	27. 1	27. 8
27	Tu.	28	22. 18	270. 43	278. 48	26. 50	26. 1
28	W.	29	23. 20	286. 51	294. 49	24. 48	23. 5
29	Th.	1	☌	302. 38	310. 15	21. 0	18. 33
30	F.	2	0. 18	317. 41	324. 55	15. 46	12. 46
31	Sa.	3	1. 13	331. 58	338. 49	9. 32	6. 11

JANUARY 1767.

Days of the Month.	Days of the Week.	Semid^r. ☽ at Noon.	Semid^r. ☽ at Mid-night.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	Th.	16. 34	16. 35	60. 47	60. 51	9944	9939
2	F.	16. 35	16. 34	60. 52	60. 49	9938	9941
3	Sa.	16. 32	16. 30	60. 42	60. 32	9950	9962
4	Su.	16. 26	16. 21	60. 18	60. 1	9979	9999
5	M.	16. 16	16. 11	59. 43	59. 25	0021	0042
6	Tu.	16. 6	16. 0	59. 5	58. 44	0067	0093
7	W.	15. 54	15. 48	58. 22	58. 1	0120	0146
8	Th.	15. 43	15. 37	57. 40	57. 20	0172	0197
9	F.	15. 32	15. 27	57. 1	56. 43	0221	0244
10	Sa.	15. 22	15. 18	56. 25	56. 9	0267	0288
11	Su.	15. 14	15. 9	55. 53	55. 38	0309	0328
12	M.	15. 6	15. 2	55. 24	55. 12	0346	0362
13	Tu.	15. 0	14. 57	55. 2	54. 51	0375	0390
14	W.	14. 54	14. 52	54. 41	54. 32	0403	0415
15	Th.	14. 50	14. 48	54. 25	54. 19	0424	0432
16	F.	14. 47	14. 46	54. 14	54. 10	0439	0444
17	Sa.	14. 45	14. 45	54. 8	54. 8	0447	0447
18	Su.	14. 45	14. 46	54. 9	54. 12	0446	0442
19	M.	14. 47	14. 49	54. 16	54. 22	0436	0428
20	Tu.	14. 51	14. 55	54. 31	54. 43	0416	0400
21	W.	14. 59	15. 3	54. 58	55. 14	0381	0359
22	Th.	15. 8	15. 13	55. 32	55. 52	0336	0310
23	F.	15. 19	15. 26	56. 14	56. 39	0282	0250
24	Sa.	15. 33	15. 41	57. 6	57. 35	0215	0179
25	Su.	15. 49	15. 57	58. 3	58. 33	0143	0106
26	M.	16. 4	16. 12	59. 2	59. 29	0071	0038
27	Tu.	16. 19	16. 26	59. 54	60. 18	0007	9979
28	W.	16. 32	16. 37	60. 40	60. 58	9952	9931
29	Th.	16. 41	16. 43	61. 12	61. 21	9914	9903
30	F.	16. 44	16. 44	61. 26	61. 25	9898	9899
31	Sa.	16. 43	16. 40	61. 20	61. 11	9905	9915

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1					
2	α Pegaſi.	46. 41. 15	44. 57. 51	43. 14. 53	41. 32. 32
3		33. 15. 35	31. 40. 16	30. 6. 42	28. 35. 2
4	α Arietis.	57. 55. 16	56. 6. 21	54. 17. 44	52. 29. 25
5		43. 32. 47	41. 46. 31	40. 0. 36	38. 15. 1
6	Aldebaran.	62. 4. 49	60. 22. 21	58. 40. 17	56. 58. 37
7		48. 36. 32	46. 57. 27	45. 18. 47	43. 40. 35
8		35. 37. 28	34. 2. 38	32. 28. 29	30. 55. 5
9		23. 22. 20	21. 55. 18	20. 30. 0	19. 7. 3
10	Pollux.	51. 3. 14	49. 27. 59	47. 52. 57	46. 18. 9
11		38. 27. 43	36. 54. 20	35. 21. 12	33. 48. 17
12	Regulus.	62. 42. 22	61. 9. 30	59. 36. 47	58. 4. 13
13		50. 23. 35	48. 51. 53	47. 20. 18	45. 48. 52
14		38. 13. 40	36. 43. 0	35. 12. 28	33. 42. 3
15		26. 11. 51	24. 42. 9	23. 12. 34	21. 43. 10
16	Spica ♍	68. 17. 41	66. 48. 34	65. 19. 30	63. 50. 31
17		56. 26. 28	54. 57. 51	53. 29. 15	52. 0. 41
18		44. 38. 16	43. 9. 50	41. 41. 25	40. 13. 0
19		32. 50. 51	31. 22. 21	29. 53. 51	28. 25. 19
20		21. 2. 16	19. 33. 33	18. 4. 47	16. 36. 0
21	Antares.	54. 40. 6	53. 9. 18	51. 38. 17	50. 7. 5
22		42. 27. 36	40. 54. 57	39. 22. 2	37. 48. 50
20	The Sun.	120. 36. 39	119. 14. 38	117. 52. 30	116. 30. 15
21		109. 36. 50	108. 13. 39	106. 50. 14	105. 26. 38
22		98. 25. 11	97. 0. 7	95. 34. 48	94. 9. 12
23		86. 56. 45	85. 29. 15	84. 1. 25	82. 33. 14
24		75. 6. 56	73. 36. 29	72. 5. 38	70. 34. 23
25		62. 51. 46	61. 17. 54	59. 43. 36	58. 8. 51
26		50. 8. 25	48. 30. 56	46. 53. 0	45. 14. 36

JANUARY 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1					
2	α Pegaſi.	39. 50. 58	38. 10. 19	36. 30. 46	34. 52. 28
3	α Arietis.	65. 13. 31	63. 23. 32	61. 33. 51	59. 44. 25
4		50. 41. 24	48. 53. 46	47. 6. 28	45. 19. 27
5		36. 29. 47	34. 44. 53	33. 0. 20	31. 16. 7
6	Aldebaran.	55. 17. 21	53. 36. 26	51. 55. 59	50. 16. 1
7		42. 2. 53	40. 25. 41	38. 49. 2	37. 12. 57
8		29. 22. 31	27. 50. 53	26. 20. 15	24. 50. 43
9	Pollux.	57. 26. 37	55. 50. 26	54. 14. 28	52. 38. 44
10		44. 43. 36	43. 9. 17	41. 35. 12	40. 1. 20
11		32. 15. 38	30. 43. 12	29. 11. 1	27. 39. 3
12	Regulus.	56. 31. 48	54. 59. 33	53. 27. 25	51. 55. 26
13		44. 17. 33	42. 46. 23	41. 15. 21	39. 44. 26
14		32. 11. 46	30. 41. 35	29. 11. 34	27. 41. 38
15		20. 13. 55	18. 44. 51	17. 15. 54	15. 47. 8
16	Spica ♍	62. 21. 35	60. 52. 44	59. 23. 56	57. 55. 11
17		50. 32. 8	49. 3. 39	47. 35. 11	46. 6. 43
18		38. 44. 36	37. 16. 10	35. 47. 44	34. 19. 17
19		26. 56. 47	25. 28. 11	23. 59. 35	22. 30. 56
20	Antares.	60. 41. 38	59. 11. 30	57. 41. 12	56. 10. 42
21		48. 35. 39	47. 4. 0	45. 32. 7	43. 59. 59
22		36. 15. 22	34. 41. 36	33. 7. 32	31. 33. 5
20	The Sun.	115. 7. 53	113. 45. 22	112. 22. 42	110. 59. 51
21		104. 2. 48	102. 38. 43	101. 14. 25	99. 49. 55
22		92. 43. 22	91. 17. 10	89. 50. 40	88. 23. 51
23		81. 4. 44	79. 35. 52	78. 6. 36	76. 36. 58
24		69. 2. 45	67. 30. 39	65. 58. 7	64. 25. 10
25		56. 33. 42	54. 58. 3	53. 21. 58	51. 45. 25
26		43. 35. 45	41. 56. 29	40. 16. 48	

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
3	The Sun.	38. 54. 39	40. 38. 0	42. 21. 10	44. 4. 9
4		52. 35. 55	54. 17. 35	55. 58. 59	57. 40. 8
5		66. 1. 21	67. 40. 44	69. 19. 50	70. 58. 36
6		79. 7. 48	80. 44. 42	82. 21. 18	83. 57. 34
7		91. 54. 7	93. 28. 35	95. 2. 43	96. 36. 29
8		104. 21. 2	105. 53. 17	107. 24. 55	108. 56. 26
9		116. 30. 10	118. 0. 10	119. 29. 54	120. 59. 24
7	α Pegaſi.				
8		43. 30. 41	45. 2. 19	46. 34. 9	48. 6. 9
9		55. 47. 3	57. 19. 14	58. 51. 23	60. 23. 29
10		68. 2. 48	69. 34. 21	71. 5. 47	72. 37. 7
11	α Arietis.	37. 5. 45	38. 39. 12	40. 12. 30	41. 45. 42
2		49. 29. 42	51. 2. 7	52. 34. 24	54. 6. 34
13	Aldebaran.	30. 50. 1	32. 16. 25	33. 43. 7	35. 10. 3
14		42. 27. 7	43. 54. 52	45. 22. 37	46. 50. 25
15		54. 9. 39	55. 37. 28	57. 5. 17	58. 33. 5
16		65. 51. 36	67. 19. 12	68. 46. 47	70. 14. 19
17	Pollux.	34. 58. 34	36. 26. 25	37. 54. 17	39. 22. 12
18		46. 42. 14	48. 10. 18	49. 38. 25	51. 6. 34
19	Regulus.	21. 26. 50	22. 55. 25	24. 24. 4	25. 52. 47
20		33. 18. 4	34. 47. 29	36. 17. 2	37. 46. 45
21		45. 17. 35	46. 48. 21	48. 19. 18	49. 50. 26
22		57. 29. 27	59. 2. 2	60. 34. 53	62. 8. 1
23	Spica ♍	16. 8. 6	17. 41. 45	19. 15. 54	20. 50. 31
24		28. 50. 52	30. 28. 22	32. 6. 20	33. 44. 45
25		42. 3. 40	43. 44. 49	45. 26. 25	47. 8. 28
26		55. 45. 41	57. 30. 33	59. 15. 53	61. 1. 41
27	Antares.	24. 5. 11	25. 53. 47	27. 42. 47	29. 32. 11
28		38. 44. 45	40. 36. 18	42. 28. 11	44. 20. 23

JANUARY 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
3	The Sun.	45. 46. 57	47. 29. 32	49. 11. 53	50. 54. 1
4		59. 20. 59	61. 1. 30	62. 41. 45	64. 21. 41
5		72. 37. 4	74. 15. 12	75. 53. 3	77. 30. 34
6		85. 33. 32	87. 9. 8	88. 44. 25	90. 19. 24
7		98. 9. 55	99. 43. 7	101. 16. 2	102. 48. 40
8		110. 27. 41	111. 58. 41	113. 29. 26	114. 59. 54
9					
7	α Pegaſi.	37. 26. 54	38. 57. 20	40. 28. 9	41. 59. 17
8		49. 38. 15	51. 10. 24	52. 42. 35	54. 14. 48
9		61. 55. 32	63. 27. 29	64. 59. 20	66. 31. 6
10		74. 8. 20	75. 39. 25	77. 10. 23	78. 41. 13
11	α Arietis.	43. 18. 45	44. 51. 41	46. 24. 28	47. 57. 10
12	Aldebaran.	25. 8. 56	26. 33. 22	27. 58. 25	29. 23. 58
13		36. 37. 11	38. 4. 27	39. 31. 49	40. 59. 22
14		48. 18. 16	49. 46. 6	51. 13. 55	52. 41. 47
15		60. 0. 52	61. 28. 36	62. 56. 17	64. 23. 58
16		71. 41. 50	73. 9. 19	74. 36. 45	76. 4. 9
17	Pollux.	40. 50. 9	42. 18. 7	43. 46. 7	45. 14. 10
18		52. 34. 46	54. 3. 1	55. 31. 19	56. 59. 40
19	Regulus.	27. 21. 36	28. 50. 31	30. 19. 35	31. 48. 45
20		39. 16. 36	40. 46. 38	42. 16. 47	43. 47. 7
21		51. 21. 44	52. 53. 20	54. 25. 8	55. 57. 11
22		63. 41. 24	65. 15. 8	66. 49. 10	68. 23. 31
23	Spica ♍	22. 25. 37	24. 1. 13	25. 37. 17	27. 13. 50
24		35. 23. 39	37. 2. 59	38. 42. 45	40. 23. 0
25		48. 50. 58	50. 33. 58	52. 17. 24	54. 1. 20
26		62. 47. 57	64. 34. 35	66. 21. 41	68. 9. 14
27	Antares.	31. 21. 58	33. 12. 8	35. 2. 39	36. 53. 32
28		46. 12. 54			

FEBRUARY 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	*Su.*	*4th Sun. after Epiphany.*
2	M.	Purification of V. Mary.
3	Tu.	Blas. On morrow of Pur.
4	W.	[3 ret.
5	Th.	Agatha.
6	F.	
7	Sa.	
8	*Su.*	*5th Sun. after Epiphany.*
9	M.	In 8 days of Pur. 4 ret.
10	Tu.	
11	W.	
12	Th.	Term ends.
13	F.	
14	Sa.	Valentine.
15	*Su.*	*Septuageſima-Sunday.*
16	M.	
17	Tu.	
18	W.	
19	Th.	
20	F.	
21	Sa.	
22	*Su.*	*Sexageſima-Sunday.*
23	M.	
24	Tu.	St. Matthias.
25	W.	
26	Th.	
27	F.	
28	Sa.	

Phaſes of the Moon.

	D.	H.	′
Firſt Quarter —	5.	7.	59
Full Moon ——	13.	8.	1
Laſt Quarter —	21.	8.	47
New Moon ——	28.	2.	4

Other Phenomena.

D.

3. ☾ η ♓ 14^{h}. 49′.
6. ☾ η Pleiadum 1^{h}. 58′.
7. ☾ β ♉ 20^{h}. 39′.
9. ☾ ε ♊ 6^{h}. 38′.
11. ♄ Stationary.
☾ δ ♋ 16^{h}. 22′.
15. ☾ υ ♌ 14^{h}. 23′.
18. ☉ enters ♓ at 7^{h}. 27′.
21. ☾ π ♏ 2^{h}. 35′.
☾ σ ♏ 11^{h}. 30′.
☾ α ♏ 15^{h}. 3′.
23. ☾ λ ♐ 13^{h}. 52′.
☾ φ ♐ 20^{h}. 25′.
24. ☾ σ ♐ 0^{h}. 11′.
27. ☾ θ ♒ 10^{h}. 35′.

FEBRUARY 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declination South.	Equat. of Time Add.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Su.	10. 12. 30. 34	20. 59. 55	17. 4. 26	14. 6	7
2	M.	10. 13. 31. 25	21. 3. 59	16. 47. 9	14. 13	7
3	Tu.	10. 14. 32. 14	21. 8. 2	16. 29. 35	14. 20	6
4	W.	10. 15. 33. 2	21. 12. 4	16. 11. 44	14. 26	4
5	Th.	10. 16. 33. 49	21. 16. 6	15. 53. 36	14. 30	4
6	F.	10. 17. 34. 33	21. 20. 5	15. 35. 12	14. 34	3
7	Sa.	10. 18. 35. 15	21. 24. 6	15. 16. 32	14. 37	3
8	Su.	10. 19. 35. 56	21. 28. 5	14. 57. 35	14. 40	1
9	M.	10. 20. 36. 35	21. 32. 3	14. 38. 26	14. 41	1
10	Tu.	10. 21. 37. 13	21. 36. 0	14. 19. 1	14. 42	0
11	W.	10. 22. 37. 49	21. 39. 57	13. 59. 22	14. 42	0
12	Th.	10. 23. 38. 23	21. 43. 52	13. 39. 30	14. 42	2
13	F.	10. 24. 38. 55	21. 47. 47	13. 19. 23	14. 40	2
14	Sa.	10. 25. 39. 26	21. 51. 42	12. 59. 5	14. 38	3
15	Su.	10. 26. 39. 56	21. 55. 35	12. 38. 32	14. 35	4
16	M.	10. 27. 40. 24	21. 59. 28	12. 17. 48	14. 31	4
17	Tu.	10. 28. 40. 50	22. 3. 20	11. 56. 55	14. 27	5
18	W.	10. 29. 41. 15	22. 7. 11	11. 35. 47	14. 22	6
19	Th.	11. 0. 41. 39	22. 11. 2	11. 14. 31	14. 16	7
20	F.	11. 1. 42. 2	22. 14. 52	10. 53. 3	14. 9	7
21	Sa.	11. 2. 42. 22	22. 18. 41	10. 31. 24	14. 2	7
22	Su.	11. 3. 42. 43	22. 22. 30	10. 9. 36	13. 55	9
23	M.	11. 4. 43. 1	22. 26. 18	9. 47. 38	13. 46	9
24	Tu.	11. 5. 43. 18	22. 30. 5	9. 25. 32	13. 37	10
25	W.	11. 6. 43. 33	22. 33. 52	9. 3. 17	13. 27	10
26	Th.	11. 7. 43. 47	22. 37. 39	8 40. 53	13. 17	11
27	F.	11. 8. 43. 59	22. 41. 24	8. 18. 23	13. 6	11
28	Sa.	11. 9. 44. 9	22. 45. 10	7. 55. 45	12. 55	12

FEBRUARY 1767.

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	16. 16, 5	1. 8, 1	2. 32, 1	9, 99385	10. 9. 49
7	16. 15, 5	1. 7, 4	2. 31, 8	9, 99429	10. 9. 30
13	16. 14, 4	1. 6, 8	2. 31, 5	9, 99479	10. 9. 11
19	16. 13, 1	1. 6, 1	2. 31, 0	9, 99537	10. 8. 52
25	16. 11, 7	1. 5, 6	2. 30, 5	9, 99601	10. 8. 33

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Immerſions.

Days	h ′ ″
2	17*17. 53
4	11*46. 12
6	6. 14. 32
8	0. 42. 55
9	19. 11. 24
11	13*39. 54
13	8* 8. 22
15	2. 36. 58
16	21. 5. 34
18	15*34. 14
20	10* 2. 55
22	4. 31. 41
23	23. 0. 25
25	17*29. 16
27	11*58. 6

II. Satellite. Immerſions.

Days	h ′ ″
1	23. 26. 43
5	12*43. 2
9	1. 59. 34
12	15*16. 18
16	4. 33. 13
19	17*50. 21
23	7. 7. 43
26	20. 25. 14

III. Satellite. Immerſions.

Days	h ′ ″
2	7. 5. 41
9	11* 3. 19
16	15* 1. 41
23	19. 0. 50

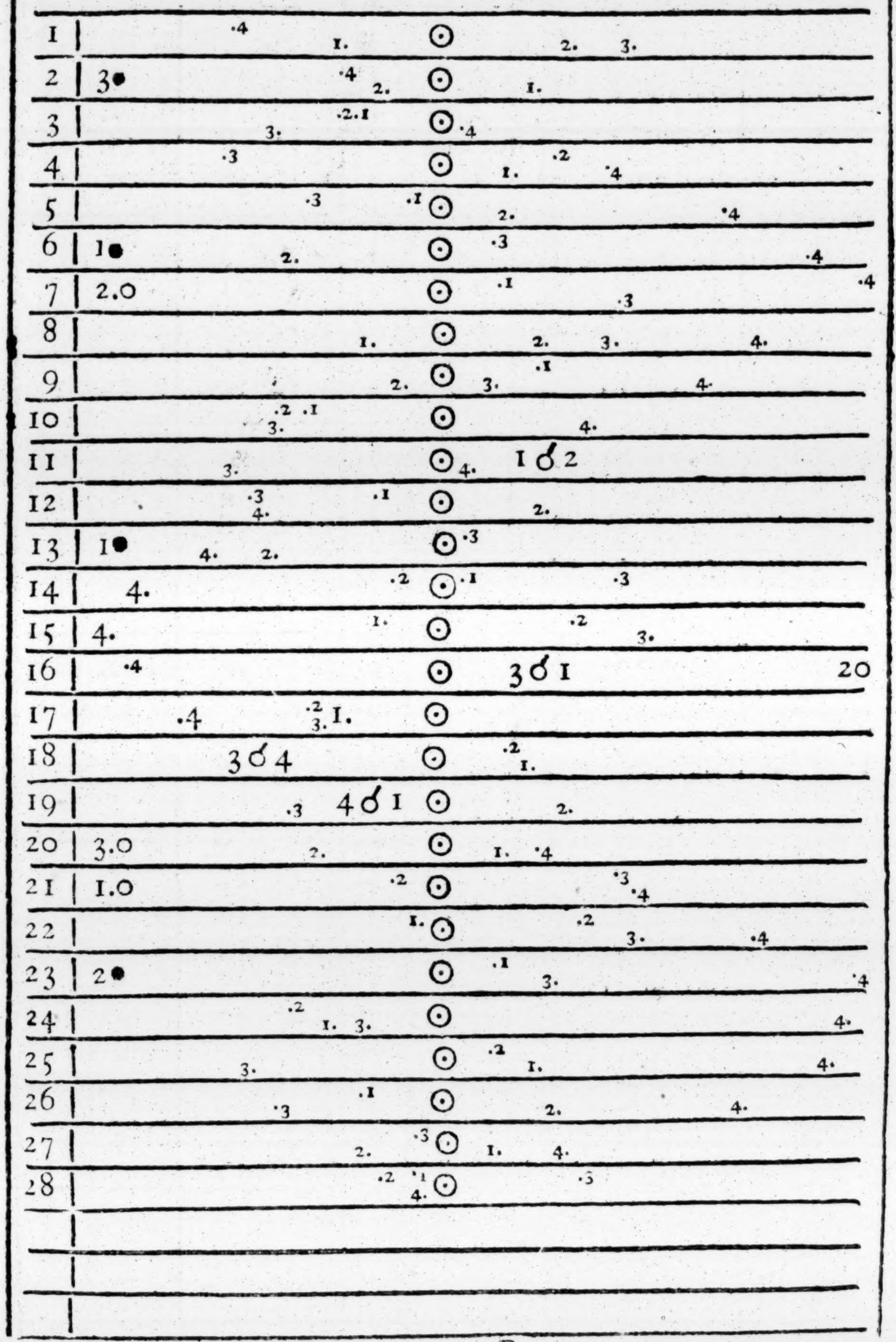
IV. Satellite.

Days	h ′ ″	
11	5. 2. 20	I
11	8*51. 14	E
27	23. 1. 54	I

FEBRUARY 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
			MERCURY.			
1	8. 0. 4	1. 45 S	9. 21. 5	0. 40 S	22. 29 S	22. 33
7	8. 16. 35	3. 37	9. 29. 45	1. 19	21. 32	22. 45
13	9. 3. 16	5. 11	10. 8. 59	1. 48	19. 45	23. 1
19	9. 20. 56	6. 21	10. 18. 43	2. 4	17. 12	23. 18
25	10. 10. 27	6. 58	10. 29. 3	2. 6	13. 47	23. 36
			VENUS.			
1	10. 25. 12	3. 12 S	10. 17. 54	1. 22 S	16. 48 S	0. 23
7	11. 4. 43	3. 20	10. 25. 25	1. 26	14. 25	0. 29
13	11. 14. 14	3. 23	11. 2. 55	1. 28	11. 48	0. 34
19	11. 23. 46	3. 21	11. 10. 25	1. 27	9. 1	0. 39
25	0. 3. 18	3. 13	11. 17. 55	1. 24	6. 4	0. 44
			MARS.			
1	2. 3. 22	0. 29 N	0. 24. 59	0. 30 N	10. 9 N	4. 31
7	2. 6. 31	0. 35	0. 28. 54	0. 35	11. 39	4. 23
13	2. 9. 38	0. 41	1. 2. 46	0. 39	13. 3	4. 13
19	2. 12. 44	0. 46	1. 6. 43	0. 43	14. 27	4. 5
25	2. 15. 47	0. 52	1. 10. 37	0. 47	15. 46	3. 58
			JUPITER.			
1	5. 15. 23	1. 13 N	5. 22. 2	1. 25 N	4. 28 N	14. 32
7	5. 15. 51	1. 13	5. 21. 30	1. 27	4. 42	14. 6
13	5. 16. 18	1. 13	5. 20. 56	1. 29	4. 58	13. 40
19	5. 16. 46	1. 14	5. 20. 15	1. 29	5. 14	13. 14
25	5. 17. 13	1. 14	5. 19. 33	1. 30	5. 32	12. 49
			SATURN.			
1	2. 18. 10	1. 22. S	2. 12. 44	1. 27 S	20. 54 N	7. 45
7	2. 18. 23	1. 22.	2. 12. 38	1. 26	20. 54	7. 20
13	2. 18. 37	1. 21.	2. 12. 37	1. 25	20. 55	6. 56
19	2. 18. 50	1. 21.	2. 12. 42	1. 23	20. 57	6. 34
25	2. 19. 4	1. 20.	2. 12. 47	1. 22	20. 59	6. 11

Configurations of the SATELLITES of JUPITER at 9 o'th' Clock in the Evening.



FEBRUARY 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	Su.	11. 15. 37. 16	11. 23. 3. 41	3. 6. 7 N	3. 37. 51 N
2	M.	0. 0. 25. 14	0. 7. 41. 18	4. 5. 41	4. 29. 14
3	Tu.	0. 14. 51. 27	0. 21. 55. 19	4. 48. 13	5. 2. 33
4	W.	0. 28. 52. 53	1. 5. 44. 4	5. 12. 8	5. 17. 9
5	Th.	1. 12. 28. 54	1. 19. 7. 41	5. 17. 38	5. 13. 52
6	F.	1. 25. 40. 42	2. 2. 8. 17	5. 6. 3	4. 54. 28
7	Sa.	2. 8. 30. 49	2. 14. 48. 49	4. 39. 21	4. 21. 1
8	Su.	2. 21. 2. 34	2. 27. 12. 42	3. 59. 52	3. 36. 0
9	M.	3. 3. 19. 25	3. 9. 23. 22	3. 9. 58	2. 41. 56
10	Tu.	3. 15. 24. 52	3. 21. 24. 20	2. 12. 15	1. 41. 21
11	W.	3. 27. 22. 1	4. 3. 18. 29	1. 9. 32	0. 37. 2 N
12	Th.	4. 9. 13. 55	4. 15. 8. 31	0. 4. 8 N	0. 28. 41 S
13	F.	4. 21. 2. 46	4. 26. 56. 50	1. 0. 56 S	1. 32. 37
14	Sa.	5. 2. 50. 58	5. 8. 45. 21	2. 3. 29	2. 32. 45
15	Su.	5. 14. 40. 23	5. 20. 36. 14	3. 0. 30	3. 26. 22
16	M.	5. 26. 33. 8	6. 2. 31. 25	3. 49. 58	4. 11. 18
17	Tu.	6. 8. 31. 27	6. 14. 33. 32	4. 29. 56	4. 45. 45
18	W.	6. 20. 38. 2	6. 26. 45. 16	4. 58. 15	5. 7. 32
19	Th.	7. 2. 55. 38	7. 9. 9. 38	5. 13. 20	5. 15. 32
20	F.	7. 15. 27. 37	7. 21. 49. 59	5. 13. 57	5. 8. 32
21	Sa.	7. 28. 17. 14	8. 4. 49. 42	4. 59. 10	4. 45. 47
22	Su.	8. 11. 27. 43	8. 18. 11. 38	4. 28. 26	4. 7. 7
23	M.	8. 25. 1. 48	9. 1. 58. 12	3. 41. 59	3. 13. 17
24	Tu.	9. 9. 1. 5	9. 16. 10. 16	2. 41. 12	2. 6. 12
25	W.	9. 23. 25. 27	10. 0. 46. 36	1. 28. 38	0. 49. 6 S
26	Th.	10. 8. 12. 54	10. 15. 43. 18	0. 8. 21 S	0. 32. 54 N
27	F.	10. 23. 17. 17	11. 0. 53. 33	1. 13. 54 N	1. 53. 42
28	Sa.	11. 8. 30. 56	11. 16. 7. 56	2. 31. 32	3. 6. 36

FEBRUARY 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſſage over Merid.	☽'s Right Aſcen. at Noon.	☽ Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			h ′	° ′	° ′	° ′	° ′
1	Su.	4	2. 7	345. 34	352. 12	2. 49 S	0. 35 N
2	M.	5	2. 57	358. 45	5. 18	3. 56 N	7. 10
3	Tu.	6	3. 46	11. 48	18. 19	10. 17	13. 14
4	W.	7	4. 37	24. 55	31. 34	15. 58	18. 26
5	Th.	8	5. 29	38. 19	45. 8	20. 37	22. 33
6	F.	9	6. 21	52. 1	58. 58	24. 9	25. 25
7	Sa.	10	7. 15	65. 57	72. 58	26. 18	26. 56
8	Su.	11	8. 9	79. 57	86. 52	27. 10	27. 5
9	M.	12	9. 2	93. 42	100. 25	26. 36	25. 50
10	Tu.	13	9. 52	107. 0	113. 26	24. 45	23. 26
11	W.	14	10. 38	119. 42	125. 46	21. 52	20. 3
12	Th.	15	11. 22	131. 41	137. 28	18. 2	15. 51
13	F.	16	12. 5	143. 6	148. 38	13. 32	11. 6
14	Sa.	17	12. 45	154. 4	159. 25	8. 33	5. 56
15	Su.	18	13. 25	164. 44	170. 1	3. 16 N	0. 34 N
16	M.	19	14. 5	175. 19	180. 39	2. 8 S	4. 51 S
17	Tu.	20	14. 44	186. 2	191. 32	7. 30	10. 8
18	W.	21	15. 28	197. 8	202. 54	12. 40	15. 6
19	Th.	22	16. 14	208. 50	214. 59	17. 24	19. 33
20	F.	23	17. 4	221. 21	227. 56	21. 29	23. 13
21	Sa.	24	18. 1	234. 48	241. 55	24. 41	25. 49
22	Su.	25	19. 0	249. 14	256. 45	26. 37	27. 1
23	M.	26	19. 59	264. 26	272. 12	27. 4	26. 41
24	Tu.	27	21. 1	280. 0	287. 49	25. 52	24. 35
25	W.	28	22. 0	295. 34	303. 11	22. 54	20. 49
26	Th.	29	22. 57	310. 40	318. 1	18. 21	15. 37
27	F.	30	23. 51	325. 13	332. 16	12. 36	9. 24
28	Sa.	1	☌	339. 12	346. 2	6. 3 S	2. 37 S

FEBRUARY 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	Su.	16. 36	16. 31	60. 57	60. 38	9932	9954
2	M.	16. 26	16. 20	60. 18	59. 55	9978	0006
3	Tu.	16. 13	16. 5	59. 30	59. 3	0036	0069
4	W.	15. 58	15. 51	58. 37	58. 10	0101	0135
5	Th.	15. 44	15. 37	57. 44	57. 19	0167	0199
6	F.	15. 30	15. 24	56. 54	56. 32	0230	0258
7	Sa.	15. 18	15. 13	56. 10	55. 51	0287	0311
8	Su.	15. 8	15. 4	55. 33	55. 17	0335	0356
9	M.	15. 0	14. 56	55. 2	54. 50	0375	0391
10	Tu.	14. 53	14. 51	54. 39	54. 30	0406	0418
11	W.	14. 49	14. 47	54. 22	54. 15	0428	0438
12	Th.	14. 46	14. 45	54. 10	54. 7	0444	0448
13	F.	14. 44	14. 44	54. 4	54. 3	0452	0454
14	Sa.	14. 44	14. 44	54. 4	54. 5	0452	0451
15	Su.	14. 45	14. 46	54. 7	54. 13	0448	0440
16	M.	14. 48	14. 50	54. 19	54. 26	0432	0423
17	Tu.	14. 52	14. 55	54. 35	54. 46	0411	0396
18	W.	14. 59	15. 3	54. 59	55. 13	0379	0361
19	Th.	15. 7	15. 12	55. 30	55. 48	0339	0315
20	F.	15. 18	15. 24	56. 8	56. 30	0289	0261
21	Sa.	15. 30	15. 37	56. 54	57. 18	0230	0200
22	Su.	15. 44	15. 51	57. 44	58. 11	0167	0134
23	M.	15. 59	16. 6	58. 40	59. 6	0098	0066
24	Tu.	16. 14	16. 21	59. 33	59. 59	0033	0002
25	W.	16. 27	16. 33	60. 22	60. 43	9974	9948
26	Th.	16. 37	16. 41	61. 1	61. 15	9927	9910
27	F.	16. 44	16. 45	61. 24	61. 29	9900	9894
28	Sa.	16. 45	16. 44	61. 29	61. 23	9894	9901

FEBRUARY 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	α Arietis.	48. 54. 15	47. 2. 48	45. 11. 41	43. 20. 55
2	Aldebaran.	66. 43. 40	64. 56. 16	63. 9. 20	61. 22. 53
3		52. 37. 40	50. 54. 8	49. 11. 11	47. 28. 46
4		39. 5. 41	37. 26. 58	35. 49. 3	34. 11. 53
5		26. 19. 51	24. 48. 51	23. 19. 19	21. 51. 27
6	Pollux.	54. 2. 54	52. 26. 23	50. 50. 13	49. 14. 23
7		41. 20. 11	39. 46. 18	38. 12. 42	36. 39. 27
8	Regulus.	65. 35. 22	64. 2. 37	62. 30. 4	60. 57. 43
9		53. 18. 51	51. 47. 36	50. 16. 28	48. 45. 31
10		41. 12. 44	39. 42. 34	38. 12. 31	36. 42. 34
11		29. 14. 29	27. 45. 8	26. 15. 52	24. 46. 43
12		17. 22. 31	16. 54. 8	14. 25. 53	12. 57. 49
13	Spica ♍	59. 32. 22	58. 3. 39	56. 34. 58	55. 6. 17
14		47. 43. 8	46. 14. 32	44. 45. 57	43. 17. 21
15		35. 54. 15	34. 25. 36	32. 56. 56	31. 28. 16
16		24. 4. 56	22. 36. 15	21. 7. 37	19. 39. 6
17	Antares.	57. 47. 41	56. 17. 34	54. 47. 18	53. 16. 55
18		45. 43. 0	44. 11. 47	42. 40. 24	41. 8. 51
19		33. 28. 15	31. 55. 29	30. 22. 29	28. 49. 16
20		20. 59. 27	19. 24. 40	17. 49. 35	16. 14. 15
21	α Aquilæ.	67. 5. 51	65. 44. 29	64. 23. 16	63. 2. 11
19	The Sun.	117. 38. 33	116. 13. 22	114. 47. 58	113. 22. 17
20		106. 10. 15	104. 43. 4	103. 15. 34	101. 47. 47
21		94. 24. 7	92. 54. 25	91. 24. 22	89. 53. 58
22		82. 16. 24	80. 43. 45	79. 10. 43	77. 37. 16
23		69. 43. 51	68. 7. 56	66. 31. 36	64. 54. 51
24		56. 44. 41	55. 5. 23	53. 25. 41	51. 45. 36
25		43. 19. 18	41. 36. 52	39. 54. 6	38. 11. 0

Days.	Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.				
	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	α Arietis.	41. 30. 28	39. 40. 31	37. 50. 57	36. 1. 46
2	Aldebaran.	59. 36. 54	57. 51. 22	56. 6. 20	54. 21. 45
3		45. 46. 57	44. 5. 44	42. 25. 6	40. 45. 5
4		32. 35. 32	31. 0. 4	29. 25. 34	27. 52. 8
5	Pollux.	60. 32. 24	58. 54. 29	57. 16. 57	55. 39. 44
6		47. 38. 54	46. 3. 43	44. 28. 52	42. 54. 22
7		35. 6. 30	33. 33. 52	32. 1. 33	30. 29. 32
8	Regulus.	59. 25. 34	57. 53. 36	56. 21. 50	54. 50. 15
9		47. 14. 41	45. 44. 0	44. 13. 27	42. 43. 1
10		35. 12. 44	33. 42. 59	32. 13. 24	30. 43. 54
11		23. 17. 40	21. 48. 41	20. 19. 49	18. 51. 6
12	Spica ♍	65. 27. 27	63. 58. 38	62. 29. 52	61. 1. 6
13		53. 37. 38	52. 8. 59	50. 40. 21	49. 11. 44
14		41. 48. 46	40. 20. 9	38. 51. 31	37. 22. 54
15		29. 59. 37	28. 30. 55	27. 2. 13	25. 33. 34
16		18. 10. 40	16. 42. 21	15. 14. 12	13. 46. 12
17	Antares.	51. 46. 24	50. 15. 46	48. 44. 59	47. 14. 4
18		39. 37. 8	38. 5. 12	36. 33. 3	35. 0. 45
19		27. 15. 50	25. 42. 6	24. 8. 8	22. 33. 55
20	α Aquilæ.	72. 31. 36	71. 10. 10	69. 48. 44	68. 27. 17
21		61. 41. 15	60. 20. 32	59. 0. 3	57. 39. 50
19	The Sun.	111. 56. 22	110. 30. 14	109. 3. 51	107. 37. 10
20		100. 19. 42	98. 51. 17	97. 22. 33	95. 53. 30
21		88. 23. 13	86. 52. 4	85. 20. 33	83. 48. 39
22		76. 3. 26	74. 29. 9	72. 54. 28	71. 19. 22
23		63. 17. 41	61. 40. 4	60. 2. 1	58. 23. 34
24		50. 5. 6	48. 24. 13	46. 42. 57	45. 1. 19

FEBRUARY 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
2	The Sun.	47. 2. 1	48. 43. 55	50. 25. 25	52. 6. 31
3		60. 26. 5	62. 4. 45	63. 43. 2	65. 20. 53
4		73. 24. 8	74. 59. 32	76. 34. 32	78. 9. 6
5		85. 56. 5	87. 28. 21	89. 0. 15	90. 31. 48
6		98. 4. 16	99. 33. 44	101. 2. 53	102. 31. 44
7		109. 51. 26	111. 18. 35	112. 45. 28	114. 12. 5
6	α Pegaſi.	65. 9. 38	66. 42. 10	68. 14. 30	69. 46. 39
7	α Arietis.	34. 13. 10	35. 46. 55	37. 20. 29	38. 53. 51
8		46. 37. 44	48. 9. 59	49. 42. 2	51. 13. 57
9	Aldebaran.	28. 6. 48	29. 31. 51	30. 57. 15	32. 22. 57
10		39. 34. 53	41. 1. 44	42. 28. 40	43. 55. 41
11		51. 11. 26	52. 38. 42	54. 6. 1	55. 33. 19
12		62. 50. 0	64. 17. 20	65. 44. 39	67. 11. 59
13	Pollux.	31. 54. 28	33. 22. 17	34. 50. 9	36. 18. 4
14		43. 38. 14	45. 6. 23	46. 34. 36	48. 2. 50
15	Regulus.	18. 23. 31	19. 52. 3	21. 20. 40	22. 49. 22
16		30. 14. 4	31. 43. 15	33. 12. 32	34. 41. 54
17		42. 10. 22	43. 40. 22	45. 10. 31	46. 40. 47
18		54. 14. 14	55. 45. 23	57. 16. 42	58. 48. 12
19	Spica ♍	12. 42. 18	14. 12. 59	15. 44. 8	17. 15. 45
20		25. 0. 35	26. 34. 41	28. 9. 9	29. 43. 58
21		37. 43. 27	39. 20. 25	40. 57. 44	42. 35. 27
22		50. 49. 37	52. 29. 38	54. 10. 4	55. 50. 54
23		64. 21. 26	66. 4. 48	67. 48. 34	69. 32. 47
24	Antares.	32. 29. 13	34. 16. 4	36. 3. 27	37. 51. 11
25		46. 55. 56	48. 46. 6	50. 36. 38	52. 27. 31
26		61. 46. 54	63. 39. 37	65. 32. 35	67. 25. 46
27					

FEBRUARY 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	40. 10. 52	41. 54. 11	43. 37. 9	45. 19. 46
2		53. 47. 13	55. 27. 32	57. 7. 27	58. 46. 58
3		66. 58. 20	68. 35. 24	70. 12. 3	71. 48. 18
4		79. 43. 17	81. 17. .4	82. 50 27	84. 23. 28
5		92. 2. 59	93. 33. 49	95. 4 18	96. 34. 28
6		104. 0. 15	105. 28. 28	106. 56. 24	108. 24. 4
7		115. 38. 27	117. 4. 35	118. 30. 29	119. 56. 7
6	α Pegaſi.	71. 18. 35	72. 50. 18	74. 21. 50	75. 53. 9
7	α Arietis.	40. 27. 0	41. 59. 58	43. 32. 44	45. 5. 19
8		52. 45. 40	54. 17. 14	55. 48. 36	57. 19. 50
9	Aldebaran.	33. 48. 53	35. 15. 8	36. 41. 31	38. 8. 8
10		45. 22. 46	46. 49. 52	48. 17. 1	49. 44. 12
11		57. 0. 40	58. 28. 0	59. 55. 19	61. 22. 40
12		68. 39. 18	70. 6. 38	71. 34. 0	73. 1. 23
13	Pollux.	37. 46. 1	39. 14. 0	40. 42. 2	42. 10. 7
14		49. 31. 8	50. 59. 29	52. 27. 52	53. 56. 18
15	Regulus.	24. 18. 8	25. 46. 59	27. 15. 56	28. 44. 57
16		36. 11. 23	37. 40. 58	39. 10. 39	40. 40. 27
17		48. 11. 11	49. 41. 43	51. 12. 24	52. 43. 14
18		60. 19. 51	61. 51. 43	63. 23. 47	64. 56. 2
19	Spica ♍	18. 47. 48	20. 20. 24	21. 53. 22	23. 26. 47
20		31. 19. 9	32. 54. 41	34. 30. 35	36. 6. 50
21		44. 13. 29	45. 51. 56	47. 30. 46	49. 10. 0
22		57. 32. 9	59. 13. 50	60. 55. 57	62. 38. 29
23		71. 17. 25	73. 2. 30	74. 48. 1	76. 32. 58
24	Antares.	39. 39. 21	41. 27. 54	43. 16. 51	45. 6. 12
25		54. 18. 46	56. 10. 21	58. 2. 14	59. 54. 25
26		69. 19. 12	71. 12. 49	73. 6. 39	75. 0. 42

MARCH 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	*Su.*	*Quinquageſima, or Shrove-*
2	M.	Chad. [*Sunday.*
3	Tu.	
4	W.	Aſh-Wedneſday.
5	Th.	Prs. of Heſſe born.
6	F.	
7	Sa.	Perpetua.
8	*Su.*	*1ſt. Sunday in Lent.*
9	M.	
10	Tu	
11	W.	
12	Th.	Gregory M.
13	F.	
14	Sa.	
15	*Su.*	*2d. Sunday in Lent.*
16	M.	
17	Tu.	
18	W.	Edw. K. of Weſt-Sax.
19	Th.	Prs. Louiſa-Ann born.
20	F.	
21	Sa.	Benedict.
22	*Su.*	*3d. Sunday in Lent.*
23	M.	
24	Tu.	[D. of York born.
25	W.	Annunciat. of the V.M.
26	Th.	
27	F.	
28	Sa.	[*Sunday.*
29	*Su.*	*4th Sun. in Lent, Midlent*
30	M.	
31	Tu.	

Phaſes of the Moon.

	D.	H.	'
Firſt Quarter —	6.	22.	10
Full Moon ——	15.	2.	40
Laſt Quarter ——	22.	20.	16
New Moon ——	29.	11.	39

Other Phenomena.

D.

3. ☾ ν ♓ 0ʰ 12′
5. ☾ η Pleiadum 9ʰ 26′. Some of the Pleiades will be eclipſed.
7. ♂ δ ♈ diff. Lat. 55′
8. ☾ ε ♊ 12ʰ 48′
10. ☾ δ ♋ 22ʰ 33′
14. ☾ υ ♌ 20ʰ 35′
15. ♄ ι ♉ diff. Lat. 3′
20. ☉ enters ♈ at 8ʰ 1′
    ♀ ζ ♓ diff. Lat. 39′
    ☾ ϖ ♏ 8ʰ 39′
    ☾ σ ♏ 17ʰ 42′
    ☾ α ♏ 21ʰ 18′
21. ☾ ſeq. θ Ophiuchi 19ʰ 27′
22. ☾ λ ♐ 21ʰ 18′
23. ☾ σ ♐ 7ʰ 56′
26. ☾ θ ♒ 21ʰ 9′
29. ♃ σ ♌ diff. Lat. 10′

MARCH 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declin. South.	Equat. of Time Add.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Su.	11. 10. 44. 18	22. 48. 55	7. 33. 0	12. 43	13
2	M.	11. 11. 44. 25	22. 52. 39	7. 10. 8	12. 30	13
3	Tu.	11. 12. 44. 29	22. 56. 23	6. 47. 11	12. 17	13
4	W.	11. 13. 44. 32	23. 0. 6	6. 24. 8	12. 4	14
5	Th.	11. 14. 44. 32	23. 3. 49	6. 0. 59	11. 50	14
6	F.	11. 15. 44. 30	23. 7. 31	5. 37. 47	11. 36	15
7	Sa.	11. 16. 44. 25	23. 11. 13	5. 14. 29	11. 21	15
8	Su.	11. 17. 44. 16	23. 14. 54	4. 51. 9	11. 6	15
9	M.	11. 18. 44. 9	23. 18. 35	4. 27. 43	10. 51	16
10	Tu.	11. 19. 43. 58	23. 22. 16	4. 4. 15	10. 35	16
11	W.	11. 20. 43. 45	23. 25. 56	3. 40. 44	10. 19	16
12	Th.	11. 21. 43. 29	23. 29. 36	3. 17. 11	10. 3	17
13	F.	11. 22. 43. 11	23. 33. 16	2. 53. 35	9. 46	17
14	Sa.	11. 23. 42. 51	23. 36. 55	2. 29. 58	9. 29	17
15	Su.	11. 24. 42. 28	23. 40. 34	2. 6. 18	9. 12	18
16	M.	11. 25. 42. 4	23. 44. 13	1. 42. 39	8. 54	17
17	Tu.	11. 26. 41. 38	23. 47. 52	1. 18. 58	8. 37	19
18	W.	11. 27. 41. 10	23. 51. 31	0. 55. 17	8. 18	17
19	Th.	11. 28. 40. 40	23. 55. 9	0. 31. 36	8. 1	19
20	F.	11. 29. 40. 8	23. 58. 47	0. 7. 55	7. 42	18
				North.		
21	Sa.	0. 0. 39. 35	0. 2. 25	0. 15. 46	7. 24	18
22	Su.	0. 1. 39. 0	0. 6. 3	0. 39. 26	7. 6	19
23	M.	0. 2. 38. 23	0. 9. 41	1. 3. 4	6. 47	19
24	Tu.	0. 3. 37. 45	0. 13. 19	1. 26. 41	6. 28	19
25	W.	0. 4. 37. 4	0. 16. 57	1. 50. 15	6. 9	18
26	Th.	0. 5. 36. 23	0. 20. 35	2. 13. 48	5. 51	19
27	F.	0. 6. 35. 39	0. 24. 13	2. 37. 17	5. 32	19
28	Sa.	0. 7. 34. 53	0. 27. 51	3. 0. 44	5. 13	19
29	Su.	0. 8. 34. 6	0. 31. 28	3. 24. 7	4. 54	18
30	M.	0. 9. 33. 16	0. 35. 6	3. 47. 26	4. 36	19
31	Tu.	0. 10. 32. 24	0. 38. 44	4. 10. 41	4. 17	

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	16. 10, 7	1. 5, 3	2. 30, 2	9. 99645	10. 8. 21
7	16. 9, 2	1. 4, 9	2. 29, 7	9. 99712	10. 8. 1
13	16. 7, 5	1. 4, 6	2. 29, 2	9. 99782	10. 7. 42
19	16. 5, 9	1. 4, 4	2. 28, 8	9. 99856	10. 7. 23
25	16. 4, 3	1. 4, 3	2. 28, 3	9. 99933	10. 7. 4

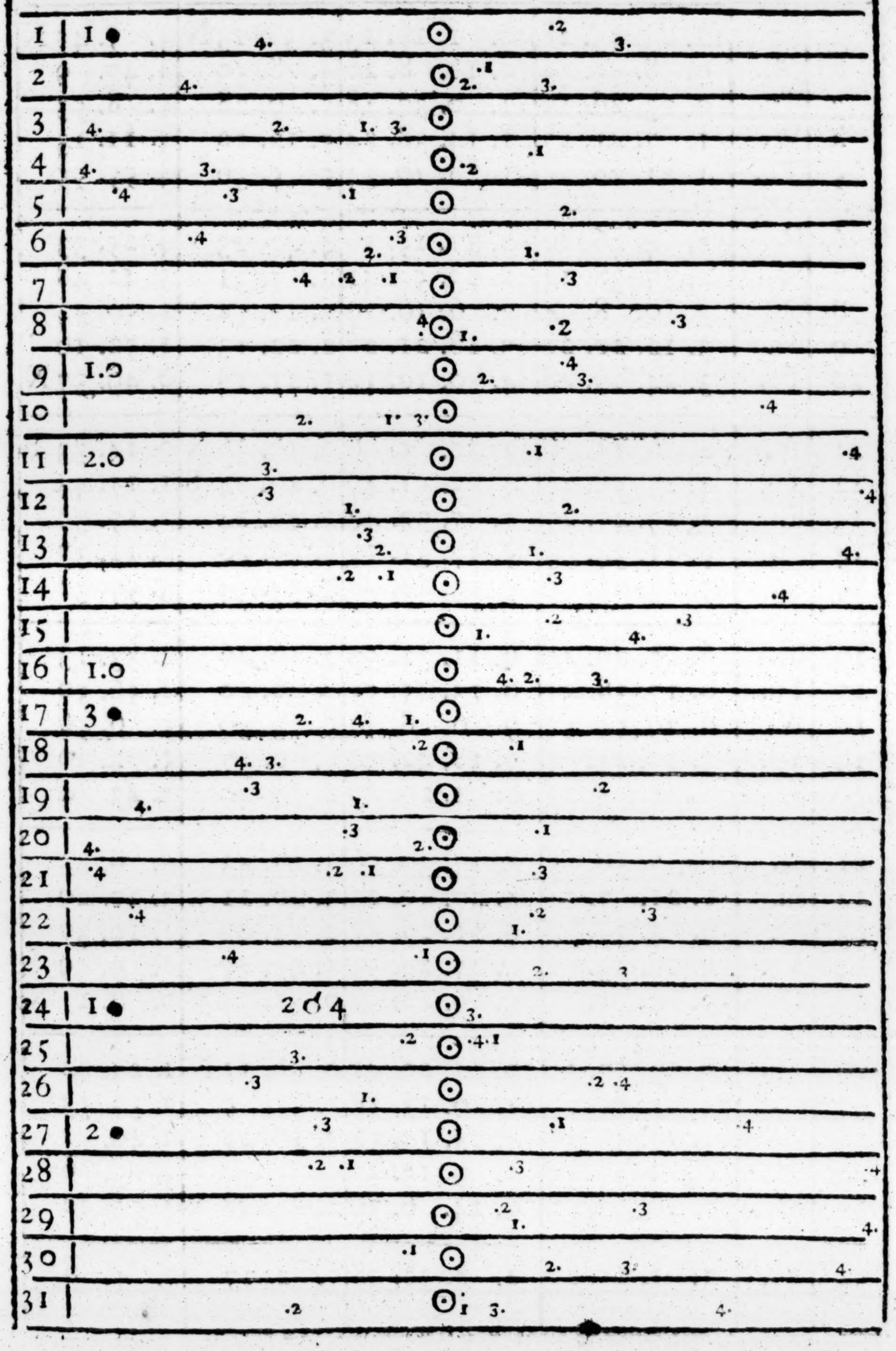
Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Immerſions.		II. Satellite. Immerſions.		III. Satellite. Immerſions.	
D.	h ′ ″	D.	h ′ ″	D.	h ′ ″
1	6*27. 1	2	9*42. 56	2	23. 0. 36
3	0. 55. 57	5	23. 0. 47		Emerſions.
4	19. 24. 53		Emerſions.	10	6. 11. 25
6	13*53. 53	9	15* 2. 5	17	10*11. 19
8	8*22. 52	13	4. 20. 10	24	14*11. 30
	Emerſions.	16	17. 38. 20	31	18. 12. 26
10	5. 5. 12	20	6*56. 37	IV. Satellite.	
11	23. 34. 14	23	20. 15. 3		
13	18. 3. 19	27	9*33. 30		
15	12*32. 22	30	22. 52. 5	16	20. 42. 53 E
17	7* 1 29				
19	1. 30. 35				
20	19. 59. 44				
22	14*28. 50				
24	8*58. 0				
26	3. 27. 8				
27	21. 56. 19				
29	16*25. 27				
31	10*54. 37				

MARCH 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
			MERCURY.		ſup. ☌ 6^d 1^h	
1	10. 25. 0	6. 54 S	11. 6. 17	1. 59 S	11. 4 S	23. 46
7	11. 20. 8	5. 48	11. 17. 38	1. 33	6. 19	0. 6
13	0. 20. 15	3. 1	11. 29. 28	0. 46	0. 52	0. 26
19	1. 25. 28	1. 11 N	0. 11. 12	0. 18 N	4. 43 N	0. 46
25	3. 3. 11	5. 10	0. 21. 42	1 31	9. 52	1. 1
			VENUS.			
1	0. 9. 39	3. 4 S	11. 22. 54	1. 21 S	4. 4 S	0. 47
7	0. 19. 14	2. 47	0. 0. 22	1. 13	0. 59	0. 52
13	0. 28. 50	2. 26	0. 7. 50	1. 5	2. 7 N	0. 57
19	1. 8. 25	2. 0	0. 15. 14	0. 54	5. 11	1. 2
25	1. 18. 2	1. 31	0. 22. 41	0. 41	8. 12	1. 8
			MARS.			
1	2. 17. 48	0. 55 N	1. 13. 13	0. 49 N	16. 37 N	3. 53
7	2. 20. 49	1. 0	1. 17. 7	0. 52	17. 47	3. 47
13	2. 23. 47	1. 5	1. 21. 3	0. 55	18. 55	3. 40
19	2. 26. 45	1. 9	1. 24. 55	0. 57	19. 58	3. 34
25	2. 29. 40	1. 14	1. 28. 49	1. 0	20. 55	3. 28
			JUPITER.			☍ 8^d 8^h
1	5. 17. 31	1. 14 N	5. 19. 3	1. 31 N	5. 44 N	12. 31
7	5. 17. 59	1. 14	5. 18. 15	1. 30	6. 1	12. 6
13	5. 18. 26	1. 14	5. 17. 30	1. 30	6. 18	11. 41
19	5. 18. 53	1. 15	5. 16. 43	1. 31	6. 39	11. 16
25	5. 19. 21	1. 15	5. 15. 59	1. 31	6. 56	10. 52
			SATURN.			□ 3^d 6^h
1	2. 19. 13	1. 20 S	2. 12. 53	1. 21 S	21. 2 N	5. 58
7	2. 19. 26	1. 20	2. 13. 7	1. 20	21. 5	5. 36
13	2. 19. 40	1. 19	2. 13. 24	1. 18	21. 8	5. 16
19	2. 19. 53	1. 19	2. 13. 45	1. 17	21. 12	4. 55
25	2. 20. 7	1. 18	2. 14. 9	1. 15	21. 16	4. 35

Configurations of the SATELLITES of JUPITER at 8 o'th' Clock in the Evening.



MARCH 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	Su.	11. 23. 43. 28	0. 1. 16. 13	3. 38. 13 N	4. 5. 45 N
2	M.	0. 8. 44. 49	0. 16. 8. 26	4. 28. 50	4. 47. 9
3	Tu.	0. 23. 26. 10	1. 0. 37. 18	5. 0. 28	5. 8. 53
4	W.	1. 7. 41. 27	1. 14. 38. 24	5. 12. 22	5. 11. 13
5	Th.	1. 21. 28. 2	1. 28. 10. 34	5. 5. 36	4. 55. 55
6	F.	2. 4. 46. 12	2. 11. 15. 16	4. 42 23	4. 25. 33
7	Sa.	2. 17. 38. 14	2. 23. 55. 41	4. 5. 31	3. 42. 48
8	Su.	3. 0. 8. 4	3. 6. 16. 9	3. 17. 52	2. 50. 52
9	M.	3. 12. 20. 20	3. 18. 21. 26	2. 22. 13	1. 52. 16
10	Tu.	3. 24. 19. 48	4. 0. 16. 12	1. 21. 18	0. 49. 37 N
11	W.	4. 6. 11. 6	4. 12. 5. 6	0. 17. 36 N	0. 14. 33 S
12	Th.	4. 17. 58. 28	4. 23. 51. 47	0. 46. 24 S	1. 17. 44
13	F.	4. 29. 45. 27	5. 5. 39. 44	1. 48. 14	2. 17. 35
14	Sa.	5. 11. 34. 54	5. 17. 31. 17	2. 45. 26	3. 11. 37
15	Su.	5. 23. 29. 5	5. 29. 28. 28	3. 35. 44	3. 57. 31
16	M.	6. 5. 29. 45	6. 11. 32. 57	4. 16. 46	4. 33. 13
17	Tu.	6. 17. 38. 21	6. 23. 45. 55	4. 46. 40	4. 56. 50
18	W.	6. 29. 55. 55	7. 6. 8. 40	5. 3. 40	5. 6. 56
19	Th.	7. 12. 24. 7	7. 18. 42. 34	5. 6. 37	5. 2. 30
20	F.	7. 25. 4. 13	8. 1. 29. 19	4. 54. 40	4. 43. 4
21	Sa.	8. 7. 58. 8	8. 14. 30. 56	4. 27. 43	4. 8. 42
22	Su.	8. 21. 7. 54	8. 27. 49. 23	3. 46. 11	3. 20. 20
23	M.	9. 4. 35. 36	9. 11. 26. 45	2. 51. 20	2. 19. 30
24	Tu.	9. 18. 23. 1	9. 25. 24. 34	1. 45. 17	1. 9. 9 S
25	W.	10. 2. 31. 11	10. 9. 42. 58	0. 31. 21 S	0. 7. 17 N
26	Th.	10. 16. 59. 35	10. 24. 20. 41	0. 46. 13 N	1. 24. 42
27	F.	11. 1. 45. 32	11. 9. 13. 29	2. 2. 5	2. 37. 33
28	Sa.	11. 16. 43. 39	11. 24. 14. 52	3. 10. 25	3. 40. 1
29	Su.	0. 1. 45. 58	0. 9. 15. 47	4. 5. 44	4. 27. 6
30	M.	0. 16. 43. 3	0. 24. 6. 36	4. 43. 48	4. 55. 32
31	Tu.	1. 1. 25. 23	1. 8. 38. 38	5. 2. 17	5. 4. 6

MRRCH 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			h ′	° ′	° ′	° ′	° ′
1	Su.	2	0. 43	352. 48	359. 32	0. 50 N	4. 16 N
2	M.	3	1. 36	6. 14	13. 0	7. 36	10. 47
3	Tu.	4	2. 28	19. 47	26. 38	13. 45	16. 31
4	W.	5	3. 21	33. 32	40. 31	19. 1	21. 13
5	Th.	6	4. 15	47. 35	54. 43	23. 4	24. 34
6	F.	7	5. 11	61. 52	69. 1	25. 43	26. 32
7	Sa.	8	6. 7	76. 8	83. 12	26. 59	27. 3
8	Su.	9	6. 59	90. 9	96. 58	26. 46	26. 10
9	M.	10	7. 52	103. 39	110. 9	25. 15	24. 4
10	Tu.	11	8. 40	116. 29	122. 39	22. 36	20. 56
11	W.	12	9. 26	128. 39	134. 29	19. 3	16. 59
12	Th.	13	10. 8	140. 11	145. 45	14. 44	12. 22
13	F.	14	10. 50	151. 13	156. 38	9. 53	7. 19
14	Sa.	15	11. 29	161. 58	167. 16	4. 41 N	2. 0 N
15	Su.	16	12. 9	172. 35	177. 57	0. 43 S	3. 26 S
16	M.	17	12. 50	183. 20	188. 49	6. 7	8. 46
17	Tu.	18	13. 33	194. 23	200. 6	11. 21	13. 49
18	W.	19	14. 19	205. 59	212. 3	16. 11	18. 25
19	Th.	20	15. 8	218. 17	224. 45	20. 27	22. 16
20	F.	21	16. 1	231. 25	238. 18	23. 49	25. 6
21	Sa.	22	16. 58	245. 24	252. 41	26. 4	26. 41
22	Su.	23	17. 55	260. 4	267. 33	26. 56	26. 47
23	M.	24	18. 53	275. 7	282. 39	26. 14	25. 18
24	Tu.	25	19. 52	290. 10	297. 35	23. 56	22. 12
25	W.	26	20. 49	304. 55	312. 8	20. 7	17. 43
26	Th.	27	21. 43	319. 13	326. 11	15. 2	12. 5
27	F.	28	22. 35	333. 2	339. 50	8. 58	5. 42 S
28	Sa.	29	23. 26	346. 34	353. 16	2. 19 S	1. 5 N
29	Su.	30	☌	0. 0	6. 44	4. 27 N	7. 46
30	M.	1	0. 19	13. 33	20. 27	10. 57	13. 56
31	Tu.	2	1. 13	27. 26	34. 30	16. 42	19. 10

MARCH 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	Su.	16. 41	16. 37	61. 13	60. 58	9913	9931
2	M.	16. 32	16. 26	60. 40	60. 18	9952	9978
3	Tu.	16. 19	16. 12	59. 53	59. 26	0008	0041
4	W.	16. 4	15. 56	58. 59	58. 30	0074	0110
5	Th.	15. 48	15. 41	58. 0	57. 32	0147	0182
6	F.	15. 33	15. 27	57. 5	56. 41	0216	0247
7	Sa.	15. 20	15. 13	56. 15	55. 52	0280	0310
8	Su.	15. 8	15. 3	55. 32	55. 14	0336	0359
9	M.	14. 59	14. 54	54. 58	54. 43	0381	0400
10	Tu.	14. 52	14. 49	54. 33	54. 23	0414	0427
11	W.	14. 47	14. 46	54. 17	54. 13	0435	0440
12	Th.	14. 45	14. 44	54. 8	54. 5	0447	0451
13	F.	14. 45	14. 46	54. 6	54. 8	0450	0447
14	Sa.	14. 46	14. 47	54. 11	54. 15	0443	0438
15	Su.	14. 48	14. 51	54. 20	54. 27	0431	0422
16	M.	14. 52	14. 55	54. 34	54. 43	0412	0400
17	Tu.	14. 57	15. 1	54. 53	55. 5	0387	0371
18	W.	15. 4	15. 8	55. 17	55. 31	0356	0337
19	Th.	15. 12	15. 16	55. 45	56. 1	0319	0298
20	F.	15. 20	15. 25	56. 18	56. 36	0276	0253
21	Sa.	15. 31	15. 36	56. 56	57. 16	0228	0202
22	Su.	15. 42	15. 48	57. 38	58. 0	0175	0147
23	M.	15. 54	16. 0	58. 22	58. 45	0120	0091
24	Tu.	16. 7	16. 13	59. 8	59. 29	0063	0038
25	W.	16. 18	16. 23	59. 50	60. 9	0012	9989
26	Th.	16. 28	16. 32	60. 27	60. 41	9968	9951
27	F.	16. 35	16. 37	60. 52	60. 59	9938	9929
28	Sa.	16. 38	16. 38	61. 3	61. 3	9925	9925
29	Su.	16. 36	16. 33	60. 57	60. 46	9932	9945
30	M.	16. 30	16. 25	60. 33	60. 15	9960	9982
31	Tu.	16. 20	16. 13	59. 55	59. 31	0006	0035

MARCH 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
2	Aldebaran.	58. 34. 1	56. 45. 33	54. 57. 16	53. 9. 27
3		44. 18. 10	42. 33. 42	40. 49. 56	39. 6. 52
4		30. 43. 36	29. 5. 50	27. 29. 13	25. 53. 53
5	Pollux.	58. 14. 10	56. 33. 41	54. 53. 37	53. 14. 1
6		45. 2. 50	43. 26. 6	41. 49. 40	40. 13. 40
7	Regulus.	68. 59. 19	67. 24. 37	65. 50. 13	64. 16. 7
8		56. 30. 7	54. 57. 41	53. 25. 21	51. 53. 34
9		44. 17. 24	42. 46. 44	41. 16. 15	39. 45. 57
10		32. 16. 54	30. 47. 30	29. 18. 14	27. 49. 5
11		20. 25. 8	18. 56. 40	17. 28. 21	16. 0. 9
12	Spica ♍	62. 37. 10	61. 8. 40	59. 40. 9	58. 11. 39
13		50. 48. 57	49. 20. 23	47. 51. 46	46. 23. 9
14		38. 59. 33	37. 30. 42	36. 1. 48	34. 32. 53
15		27. 7. 45	25. 38. 39	24. 9. 31	22. 40. 22
16		15. 14. 58	13. 46. 25	12. 18. 12	10. 50. 21
17	Antares.	48. 42. 33	47. 11. 7	45. 39. 35	44. 7. 55
18		36. 27. 30	34. 54. 55	33. 22. 11	31. 49. 16
19		24. 2. 15	22. 28. 18	20. 54. 8	19. 19. 49
20	α Aquilæ	69. 42. 28	68. 21. 45	67. 1. 11	65. 40. 45
21	β Capricorni.	53. 32. 54	51. 55. 53	50. 18. 38	48. 41. 12
22		40. 30. 25	38. 51. 32	37. 12. 24	35. 33. 5
23		27. 13. 41			
21	The Sun.	112. 37. 5	111. 7. 10	109. 36. 59	108. 6. 29
22		100. 29. 44	98. 57. 29	97. 24. 55	95. 52. 3
23		88. 2. 57	86. 28. 9	84. 53. 1	83. 17. 33
24		75. 15. 10	73. 37. 40	71. 59. 48	70. 21. 38
25		62. 5. 57	60. 25. 51	58. 45. 27	57. 4. 45
26		48. 37. 5	46. 54. 44	45. 12. 11	43. 29. 26
31	Aldebaran	36. 36. 36	34. 53. 1	33. 10. 9	31. 28. 8

MARCH 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Aldebaran.	65. 53. 13	64. 2. 55	62. 12. 58	60. 23. 24
2		51. 22. 2	49. 35. 12	47. 48. 56	46. 3. 16
3		37. 24. 32	35. 42. 59	34. 2. 16	32. 22. 27
4	Pollux.	64. 59. 48	63. 17. 48	61. 36. 12	59. 54. 59
5		51. 34. 51	49. 56. 11	48. 18. 0	46. 40. 15
6		38. 38. 5	37. 2. 54	35. 28. 8	33. 53. 47
7	Regulus.	62. 42. 20	61. 18. 52	59. 35. 40	58. 2. 45
8		50. 21. 53	48. 50. 26	47. 19. 13	45. 48. 11
9		38. 15. 49	36. 45. 52	35. 16. 3	33. 46. 25
10		26. 20. 4	24. 51. 9	23. 22. 22	21. 53. 41
11		14. 32. 8	13. 4. 20	11. 36. 49	10. 9. 39
12	Spica ♍	56. 43. 7	55. 14. 36	53. 46. 4	52. 17. 31
13		44. 54. 29	43. 25. 48	41. 57. 5	40. 28. 20
14		33. 3. 56	31. 34. 56	30. 5. 54	28. 36. 52
15		21. 11. 10	19. 41. 59	18. 12. 50	16. 43. 48
16	Antares.	54. 46. 59	53. 16. 3	51. 45. 1	50. 13. 50
17		42. 36. 6	41. 4. 10	39. 32. 6	37. 59. 52
18		30. 16. 12	28. 42. 59	27. 9. 34	25. 36. 0
19	α Aquilæ.	75. 5. 53	73. 45. 0	72. 24. 8	71. 3. 16
20		64. 20. 29	63. 0. 25	61. 40. 34	60. 20. 59
21	β Capricorni.	47. 3. 31	45. 25. 36	43. 47. 26	42. 9. 3
22		33. 53. 32	32. 13. 49	30. 33. 56	28. 53. 53
20	The Sun.	118. 34. 10	117. 5. 18	115. 36. 10	114. 6. 46
21		106. 35. 43	105. 4. 40	103. 33. 19	102. 1. 41
22		94. 18. 52	92. 45. 22	91. 11. 33	89. 37. 25
23		81. 41. 45	80. 5. 37	78. 29. 8	76. 52. 20
24		68. 43. 7	67. 4. 18	65. 25. 10	63. 45. 43
25		55. 23. 45	53. 42. 28	52. 0. 56	50. 19. 8
26		41. 46. 29	40. 3. 22	38. 20. 7	36. 36. 44
31	Aldebaran	29. 47. 6	28. 7. 12	26. 28. 32	24. 51. 12

Days.	Stars Names.	Diſtances of ☽'s Center from ☉, and from Stars weſt of her.			
		Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
3	The Sun.	40. 56. 54	42. 37. 12	44. 17. 4	45. 56. 30
4		54. 7. 14	55. 44. 3	57. 20. 26	58. 56. 22
5		66. 49. 20	68. 22. 37	69. 55. 29	71. 27. 56
6		79. 3. 57	80. 33. 57	82. 3. 35	83. 32. 50
7		90. 53. 41	92. 20. 51	93. 47. 43	95. 14. 15
8		102. 22. 23	103. 47. 25	105. 12. 3	106. 36. 26
9		113. 34. 50	114. 57. 58	116. 20. 56	117. 43. 44
7	α Arietis.	43. 16. 5	44. 50. 10	46. 24. 0	47. 57. 33
8	Aldebaran.	25. 9. 1	26. 33. 51	27. 59. 4	29. 24. 39
9		36. 36. 33	38. 3. 27	39. 30. 25	40. 57. 28
10		48. 12. 58	49. 40. 6	51. 7. 13	52. 34. 21
11		59. 49. 55	61. 17. 2	62. 44. 9	64. 11. 16
12	Pollux.	28. 52. 41	30. 20. 0	31. 47. 25	33. 14. 56
13		40. 33. 53	42. 1. 53	43. 29. 58	44. 58. 8
14	Regulus.	15. 18. 50	16. 47. 18	18. 15. 54	19. 44. 37
15		27. 10. 9	28. 39. 36	30. 9. 8	31. 38. 47
16		39. 8. 42	40. 39. 3	42. 9. 30	43. 40. 5
17		51. 14. 48	52. 46. 8	54. 17. 36	55. 49. 11
18		63. 29. 12	65. 1. 42	66. 34. 23	68. 7. 13
19	Spica ♍	21. 58. 7	23. 31. 17	25. 4. 44	26. 38. 29
20		34. 31. 3	36. 6. 18	37. 41. 51	39. 17. 37
21		47. 20. 34	48. 57. 59	50. 35. 40	52. 13. 40
22		60. 27. 51	62. 7. 37	63. 47. 42	65. 28. 6
23	Antares.	28. 3. 45	29. 46. 14	31. 29. 2	33. 12. 11
24		41. 53. 7	43. 38. 21	45. 23. 56	47. 9. 50
25		56. 4. 18	57. 52. 12	59. 40. 25	61. 28. 57
26	β Capricorni.	16. 37. 26	18. 22. 45	20. 8. 57	21. 55. 58
27		31. 0. 41	32. 50. 58	34. 41. 35	36. 32. 30
28	α Aquilæ.	52. 37. 35	54. 5. 44	55. 34. 56	57. 5. 6

MARCH 1767.

Diſtances of ☽'s Center from ⊙, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
3	The Sun.	47. 35. 32	49. 14. 7	50. 52. 15	52. 29. 58
4		60. 31. 52	62, 6. 53	63. 41. 28	65. 15. 37
5		72. 59. 57	74. 31. 33	76. 2. 45	77. 33. 33
6		85. 1. 42	86. 30. 12	87. 58. 22	89. 26. 11
7		96. 40. 30	98. 6. 26	99. 32. 5	100. 57. 27
8		108. 0. 35	109. 24. 27	110. 48. 7	112. 11. 34
9		119. 6. 21			
6	α Arietis.	36. 56. 52	38. 32. 5	40. 7. 2	41, 41. 42
7		49. 30. 50	51. 3. 51	52. 36. 36	54. 9. 5
8	Aldebaran.	30. 50. 33	32. 16. 45	33. 43. 9	35. 9. 45
9		42. 24. 35	43. 51. 40	45. 18. 45	46. 45. 51
10		54. 1. 29	55. 28. 35	56. 55. 42	58. 22. 48
11		65. 38. 23	67. 5. 29	68. 32. 35	69. 59. 42
12	Pollux.	34. 42. 35	36. 10. 18	37. 38. 5	39. 5. 57
13		46. 26. 22	47. 54. 39	49. 23. 0	50. 51. 26
14	Regulus.	21. 13. 28	22. 42. 27	24. 11. 34	25. 40. 48
15		33. 8. 32	34. 38. 25	36. 8. 24	37. 38. 30
16		45. 10. 46	46. 41. 36	48. 12. 32	49. 43. 36
17		57. 20. 54	58. 52. 45	60. 24. 45	61. 56. 54
18	Spica ♍	15. 48. 39	17. 20. 33	18. 52. 46	20. 25. 17
19		28. 12. 30	29. 46. 44	31. 21. 15	32, 56. 1
20		40. 53. 41	42. 30. 0	44. 6. 34	45. 43. 27
21		53. 51. 55	55. 30. 27	57. 9. 17	58. 48. 25
22		67. 8. 48	68. 49. 50	70. 31. 11	72. 12. 52
23	Antares.	34. 55. 40	36. 39. 31	38. 23. 42	40. 8. 14
24		48. 56. 5	50. 42. 38	52. 29. 31	54. 16. 45
25		63. 17. 49	65. 6. 58	66. 56. 24	68, 46. 7
26	β Capricorni.	23. 43. 43	25. 32. 9	27. 21. 11	29. 10. 44
27	α Aquilæ.	46. 57. 42	48. 20. 33	49. 44. 53	51. 10. 35
28		58. 36. 8	60. 7. 55	61. 40. 21	63. 13. 19

APRIL 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	W.	
2	Th.	
3	F.	Richard, Bp. of Chich.
4	Sa.	St. Ambroſe.
5	*Su.*	*5th Sunday in Lent.*
6	M.	
7	Tu.	
8	W.	
9	Th.	
10	F.	Cambridge Term ends.
11	Sa.	Oxford Term ends.
12	*Su.*	*6th Sunday in Lent, Palm* [*Sunday.*
13	M.	
14	Tu.	
15	W.	
16	Th.	
17	F.	Good-Friday.
18	Sa.	
19	*Su.*	*Eaſter-Day.* Alph.
20	M.	Eaſter-Monday.
21	Tu.	Eaſter-Tueſday.
22	W.	
23	Th.	St. George.
24	F.	
25	Sa.	St. Mark.
26	*Su.*	*1ſt Sunday after Eaſter,* [*Low Sunday.*
27	M.	
28	Tu.	
29	W.	Oxford and Cambridge [Terms begin.
30	Th.	

Phaſes of the Moon.

	D.	H.	′
Firſt Quarter —	5.	14.	41
Full Moon —	13.	19.	1
Laſt Quarter —	21.	4.	28
New Moon —	27.	20.	55

Other Phenomena.

D.
1. ☾ η Pleiadum $18^h\ 56'$.
4. ☾ ε ♊ $20^h\ 24'$.
7. ☾ δ ♋ $5^h\ 27'$.
11. ☾ υ ♌ $3^h\ 24'$.
16. ☾ π ♏ Immerſion at $13^h\ 17'\frac{1}{2}$ Emerſion at $14^h\ 27'$.
☾ σ ♏ $23^h\ 22'$.
17. ☾ α ♏ $2^h\ 57'$.
18. ☾ ſequens θ Ophiuchi $1^h\ 3'$.
19. ☾ λ ♐ $3^h\ 0'$.
☾ σ ♐ $13^h\ 46'$.
☉ enters ♉ at $20^h\ 56'$.
23. ☾ θ ♒ $5^h\ 11'$.
29. ☾ η Pleiadum $5^h\ 6'$.

APRIL 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declination North.	Equat. of Time Add.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	W.	0. 11. 31. 31	0. 42. 23	4. 33. 52	3. 59	19
2	Th.	0. 12. 30. 35	0. 46. 1	4. 56. 57	3. 40	18
3	F.	0. 13. 29. 37	0. 49. 39	5. 19. 57	3. 22	18
4	Sa.	0. 14. 28. 36	0. 53. 18	5. 42. 51	3. 4	18
5	*Su.*	0. 15. 27. 33	0. 56. 56	6. 5. 39	2. 46	18
6	M.	0. 16. 26. 28	1. 0. 34	6. 28. 20	2. 28	18
7	Tu.	0. 17. 25. 20	1. 4. 14	6. 50. 56	2. 10	17
8	W.	0. 18. 24. 10	1. 7. 53	7. 13. 24	1. 53	17
9	Th.	0. 19. 22. 58	1. 11. 32	7. 35. 45	1. 36	17
10	F.	0. 20. 21. 43	1. 15. 12	7. 57. 58	1. 19	17
11	Sa.	0. 21. 20. 26	1. 18. 52	8. 20. 2	1. 2	16
12	*Su.*	0. 22. 19. 7	1. 22. 32	8. 41. 59	0. 46	16
13	M.	0. 23. 17. 46	1. 26. 12	9. 3. 46	0. 30	15
14	Tu.	0. 24. 16. 23	1. 29. 53	9. 25. 25	0. 15	16
15	W.	0. 25. 14. 58	1. 33. 34	9. 46. 54	Sub. 1	14
16	Th.	0. 26. 13. 31	1. 37. 16	10. 8. 14	0. 15	15
17	F.	0. 27. 12. 3	1. 40. 58	10. 29. 24	0. 30	14
18	Sa.	0. 28. 10. 32	1. 44. 40	10. 50. 23	0. 44	14
19	*Su.*	0. 29. 9. 1	1. 48. 23	11. 11. 12	0. 58	14
20	M.	1. 0. 7. 28	1. 52. 6	11. 31. 51	1. 12	12
21	Tu.	1. 1. 5. 53	1. 55. 49	11. 52. 18	1. 24	13
22	W.	1. 2. 4. 17	1. 59. 33	12. 12. 33	1. 37	13
23	Th.	1. 3. 2. 39	2. 3. 18	12. 32. 37	1. 50	11
24	F.	1. 4. 1. 0	2. 7. 3	12. 52. 29	2. 1	12
25	Sa.	1. 4. 59. 19	2. 10. 48	13. 12. 7	2. 13	11
26	*Su.*	1. 5. 57. 37	2. 14. 34	13. 31. 34	2. 24	9
27	M.	1. 6. 55. 53	2. 18. 21	13. 50. 46	2. 33	9
28	Tu.	1. 7. 54. 8	2. 22. 7	14. 9. 46	2. 42	9
29	W.	1. 8. 52. 20	2. 25. 55	14. 28. 31	2. 51	9
30	Th.	1. 9. 50. 31	2. 29. 43	14. 47. 2	3. 0	

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	16. 2,3	1. 4,3	2. 27,6	0. 000215	10. 6. 42
7	16. 0,6	1. 4,5	2. 27,1	0. 000944	10. 6. 23
13	15. 59,1	1. 4,7	2. 26,6	0. 001667	10. 6. 4
19	15. 57,5	1. 5,1	2. 26,1	0. 002392	10. 5. 45
25	15. 56,0	1. 5,5	2. 25,6	0. 003102	10. 5. 26

Eclipſes of the SATELLITES of JUPITER.

I. Satellite.
Emerſions.

Days	h ′ ″
2	5. 23. 49
3	23. 52. 57
5	18. 22. 11
7	12*51. 16
9	7*20. 25
11	1. 49. 33
12	20. 18. 43
14	14*47. 48
16	9*16. 55
18	3. 45. 55
19	22. 15. 4
21	16. 44. 3
23	11*13. 6
25	5. 42. 8
27	0. 11. 6
28	18. 40. 0
30	13* 8. 59

II. Satellite.
Emerſions.

Days	h ′ ″
3	12*10. 43
7	1. 29. 24
10	14*48. 9
14	4. 6. 50
17	17. 25. 28
21	6. 44. 12
24	20. 2. 57
28	9*21. 30

III. Satellite.

Days	h ′ ″
7	22. 12. 10 E
15	2. 12. 25 E
22	6. 12. 28 E
29	7* 7. 40 I
29	10*12. 8 E

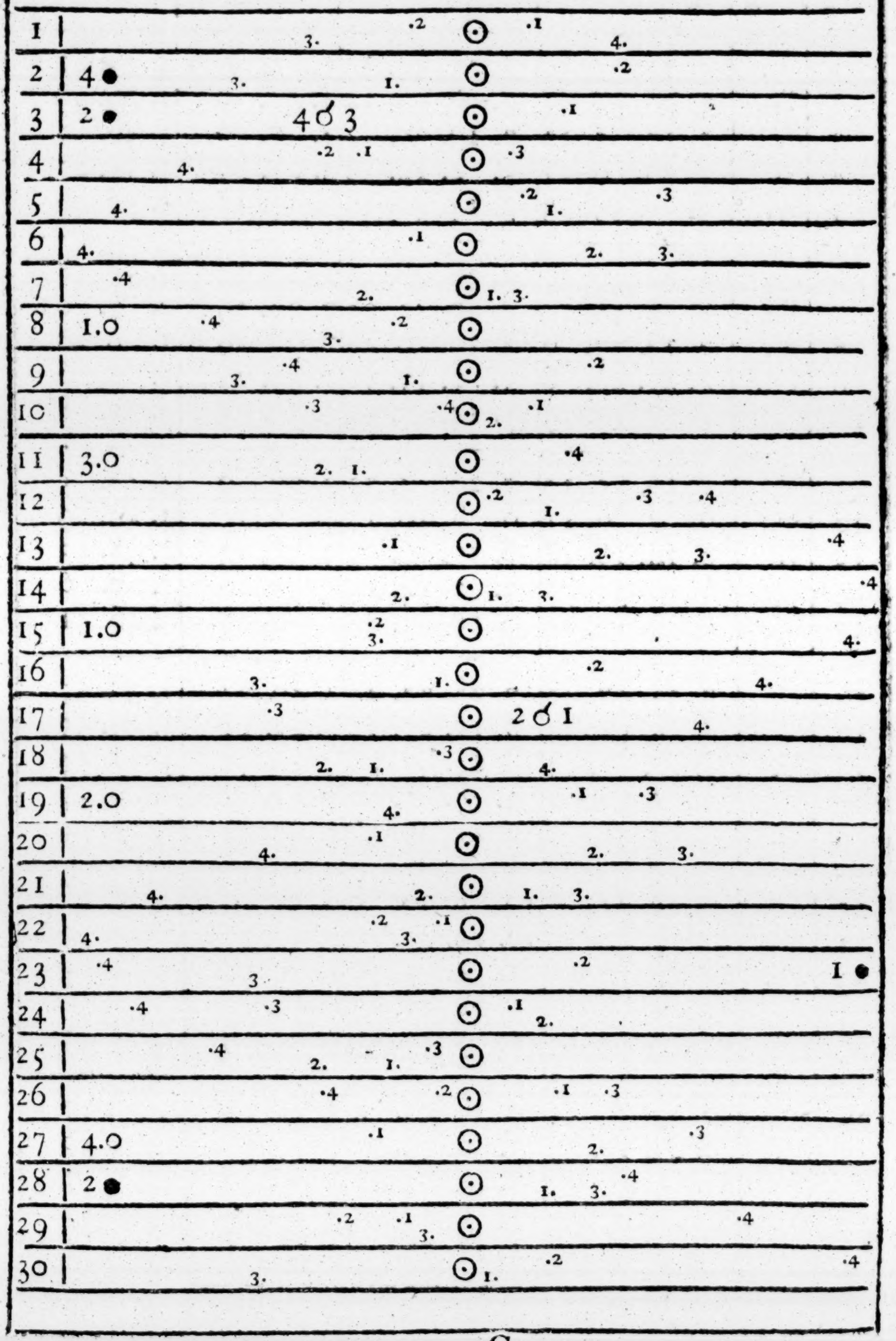
IV. Satellite.

Days	h ′ ″
2	11* 9. 31 I
2	14*41. 51 E
19	5. 14. 3 I
19	8*40. 17 E

APRIL 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
			MERCURY. inf. ☌ 19ᵈ 15ʰ			
1	4. 14. 3	6. 59 N	1. 0. 27	2. 42 N	14. 10 N	1. 7
7	5. 13. 15	6. 12	1. 3. 54	3. 8	15. 47	0. 58
13	6. 7. 22	4. 21	1. 3. 27	2. 48	15. 19	0. 35
19	6. 27. 50	2. 9	1. 0. 9	1. 37	13. 3	0. 1
25	7. 16. 0	0. 2 S	0. 26. 14	0. 2 S	10. 7	23. 22
			VENUS.			
1	1. 29. 17	0. 54 S	1. 1. 17	0. 25 S	11. 32 N	1. 14
7	2. 8. 56	0. 20	1. 8. 40	0. 8	14. 17	1. 21
13	2. 18. 37	0. 14 N	1. 16. 1	0. 7 N	16. 46	1. 28
19	2. 28. 18	0. 48	1. 23. 21	0. 23	19. 0	1. 35
25	3. 8. 1	1. 21	2. 0. 39	0. 39	20. 57	1. 43
			MARS.			
1	3. 3. 3	1. 18 N	2. 3. 20	1. 2 N	21. 51 N	3. 22
7	3. 5. 56	1. 22	2. 7. 13	1. 4	22. 36	3. 17
13	3. 8. 47	1. 26	2. 11. 6	1. 6	23. 14	3. 11
19	3. 11. 37	1. 29	2. 14. 57	1. 7	23. 44	3. 6
25	3. 14. 25	1. 32	2. 18. 47	1. 8	24. 8	3. 0
			JUPITER.			
1	5. 19. 53	1. 15 N	5. 15. 13	1. 30 N	7. 14 N	10. 24
7	5. 20. 20	1. 15	3. 14. 35	1. 29	7. 28	10. 0
13	5. 20. 48	1. 15	5. 14. 7	1. 28	7. 38	9. 36
19	5. 21. 15	1. 16	5. 13. 40	1. 28	7. 47	9. 12
25	5. 21. 42	1. 16	5. 13. 21	1. 27	7. 54	8. 48
			SATURN.			
1	2. 20. 22	1. 17 S	2. 14. 42	1. 14 S	21. 21 N	4. 11
7	2. 20. 36	1. 17	2. 15. 11	1. 13	21. 25	3. 51
13	2. 20. 49	1. 16	2. 15. 45	1. 12	21. 31	3. 31
19	2. 21. 3	1. 16	2. 16. 21	1. 11	21. 35	3. 12
25	2. 21. 16	1. 15	2. 16. 59	1. 9	21. 41	2. 52

Configurations of the SATELLITES of JUPITER at 9 o'th' Clock in the Evening.



APRIL 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	W.	1. 15. 45. 35	1. 22. 45. 42	5. 1. 8 N	4. 53. 41 N
2	Th.	1. 29. 38. 44	2. 6. 24. 32	4. 42. 5	4. 26. 39
3	F.	2. 13. 3. 12	2. 19. 35. 2	4. 7. 50	3. 46. 8
4	Sa.	2. 26. 0. 21	3. 2. 19. 39	3. 21. 49	2. 55. 27
5	Su.	3. 8. 33. 23	3. 14. 42. 16	2. 27. 15	1. 57. 46
6	M.	3. 20. 46. 57	3. 26. 48. 5	1. 27. 14	0. 55. 58 N
7	Tu.	4. 2. 46. 23	4. 8. 42. 28	0. 24. 29 N	0. 7. 9 S
8	W.	4. 14. 37. 6	4. 20. 30. 44	0. 38. 29 S	1. 9. 26
9	Th.	4. 26. 24. 8	5. 2. 17. 50	1. 39. 27	2. 8. 26
10	F.	5. 8. 12. 13	5. 14. 7. 53	2. 36. 5	3. 2. 8
11	Sa.	5. 20. 5. 19	5. 26. 4. 35	3. 26. 9	3. 48. 5
12	Su.	6. 2. 6. 11	6. 8. 10. 17	4. 7. 35	4. 24. 19
13	M.	6. 14. 16. 58	6. 20. 26. 33	4. 38. 13	4. 48. 53
14	Tu.	6. 26. 38. 58	7. 2. 54. 14	4. 56. 16	5. 0. 6
15	W.	7. 9. 12. 28	7. 15. 33. 42	5. 0. 18	4. 56. 51
16	Th.	7. 21. 57. 48	7. 28. 24. 44	4. 49. 34	4. 38. 35
17	F.	8. 4. 54. 34	8. 11. 27. 17	4. 23. 51	4. 5. 35
18	Sa.	8. 18. 2. 54	8. 24. 41. 26	3. 43. 51	3. 18. 54
19	Su.	9. 1. 23. 2	9. 8. 7. 40	2. 51. 1	2. 20. 27
20	M.	9. 14. 55. 29	9. 21. 46. 36	1. 47. 44	1. 13. 5
21	Tu.	9. 28. 41. 8	10. 5. 39. 5	0. 37. 9 S	0. 0. 16 S
22	W.	10. 12. 40. 30	10. 19. 45. 26	0. 36. 47 N	1. 13. 39 N
23	Th.	10. 26. 53. 40	11. 4. 5. 9	1. 49. 38	2. 24. 3
24	F.	11. 11. 19. 21	11. 18. 35. 57	2. 56. 21	3. 25. 56
25	Sa.	11. 25. 54. 22	0. 3. 13. 56	3. 52. 19	4. 14. 49
26	Su.	0. 10. 33. 45	0. 17. 53. 2	4. 33. 11	4. 46. 57
27	M.	0. 25. 10. 39	1. 2. 25. 51	4. 55. 59	5. 0. 10
28	Tu.	1. 9. 37. 33	1. 16. 44. 56	4. 59. 33	4. 54. 17
29	W.	1. 23. 47. 30	2. 0. 44. 25	4. 44. 29	4. 30. 40
30	Th.	2. 7. 35. 18	2. 14. 20. 4	4. 13. 1	3. 52. 4

APRIL 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			h ′	° ′	° ′	° ′	° ′
1	W.	3	2. 9	41. 43	49. 0	21. 23 N	23. 12 N
2	Th.	4	3. 6	56. 20	63. 42	24. 41	25. 47
3	F.	5	4. 4	71. 3	78. 20	26. 29	26. 49
4	Sa.	6	4. 59	85. 32	92. 35	26. 47	26. 23
5	*Su.*	7	5. 53	99. 29	106. 12	25. 39	24. 37
6	M.	8	6. 42	112. 43	119. 2	23. 18	21. 44
7	Tu.	9	7. 30	125. 9	131. 7	19. 58	18. 0
8	W.	10	8. 13	136. 54	142. 32	15. 52	13. 34
9	Th.	11	8. 54	148. 4	153. 30	11. 10	8. 40
10	F.	12	9. 36	158. 52	164. 12	6. 5	3. 27 N
11	Sa.	13	10. 16	169. 32	174. 53	0. 47 N	1. 55 S
12	*Su.*	14	10. 56	180. 17	185. 45	4. 37 S	7. 17
13	M.	15	11. 39	191. 19	197. 1	9. 55	12. 27
14	Tu.	16	12. 22	202. 52	208. 55	14. 53	17. 11
15	W.	17	13. 14	215. 8	221. 33	19. 19	21. 15
16	Th.	18	14. 6	228. 11	235. 2	22. 57	24. 22
17	F.	19	15. 2	242. 4	249. 17	25. 28	26. 14
18	Sa.	20	15. 59	256. 38	264. 4	26. 39	26. 41
19	*Su.*	21	16. 57	271. 32	279. 0	26. 19	25. 34
20	M.	22	17. 53	286. 25	293. 45	24. 25	22. 55
21	Tu.	23	18. 49	300. 57	308. 1	21. 3	18. 53
22	W.	24	19. 41	314. 57	321. 47	16. 26	13. 45
23	Th.	25	20. 32	328. 29	335. 6	10. 51	7. 48
24	F.	26	21. 22	341. 39	348. 11	4. 37 S	1. 22 S
25	Sa.	27	22. 13	354. 42	1. 16	1. 55 N	5. 11 N
26	*Su.*	28	23. 6	7. 55	14. 38	8. 22	11. 27
27	M.	29	☌	21. 29	28. 26	14. 20	17. 2
28	Tu	1	0. 0	35. 32	42. 46	19. 27	21. 33
29	W.	2	0. 57	50. 7	57. 33	23. 20	24. 45
30	Th.	3	1. 55	65. 1	72. 29	25. 46	26. 23

APRIL 1767.

Days of the Month.	Days of the Week.	Semidr. ☽ at Noon.	Semidr. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	W.	16. 6	15. 59	59. 6	58. 39	0066	0099
2	Th.	15. 51	15. 43	58. 12	57. 43	0132	0169
3	F.	15. 36	15. 29	57. 16	56. 50	0202	0235
4	Sa.	15. 22	15. 16	56. 24	56. 1	0269	0298
5	Su.	15. 10	15. 5	55. 40	55. 21	0326	0350
6	M.	15. 0	14. 56	55. 3	54. 49	0374	0392
7	Tu.	14. 53	14. 50	54. 38	54. 28	0407	0420
8	W.	14. 48	14. 48	54. 21	54. 17	0430	0435
9	Th.	14. 47	14. 47	54. 14	54. 14	0439	0439
10	F.	14. 47	14. 49	54. 17	54. 20	0435	0431
11	Sa.	14. 49	14. 52	54. 25	54. 33	0424	0414
12	Su.	14. 54	14. 56	54. 40	54. 50	0404	0391
13	M.	14. 59	15. 2	55. 0	55. 12	0378	0362
14	Tu.	15. 6	15. 9	55. 25	55. 38	0345	0328
15	W.	15. 13	15. 17	55. 51	56. 6	0311	0292
16	Th.	15. 21	15. 25	56. 20	56. 35	0274	0255
17	F.	15. 29	15. 34	56. 50	57. 6	0235	0215
18	Sa.	15. 37	15. 42	57. 21	57. 37	0196	0176
19	Su.	15. 46	15. 51	57. 52	58. 9	0157	0136
20	M.	15. 55	16. 0	58. 25	58. 41	0116	0096
21	Tu.	16. 3	16. 8	58. 55	59. 11	0079	0060
22	W.	16. 11	16. 15	59. 24	59. 38	0044	0027
23	Th.	16. 18	16. 21	59. 49	59. 59	0013	0001
24	F.	16. 23	16. 24	60. 7	60. 13	9992	9984
25	Sa.	16. 25	16. 25	60. 15	60. 14	9982	9983
26	Su.	16. 24	16. 22	60. 11	60. 5	9987	9994
27	M.	16. 19	16. 16	59. 55	59. 42	0006	0022
28	Tu.	16. 11	16. 7	59. 26	59. 8	0041	0063
29	W.	16. 1	15. 55	58. 46	58. 25	0090	0116
30	Th.	15. 48	15. 42	58. 1	57. 37	0146	0176

APRIL 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Aldebaran	23. 15. 18	21. 41. 20	20. 9. 31	18. 40. 15
2	Pollux.	50. 8. 20	48. 27. 11	46. 46. 31	45. 6. 18
3		36. 52. 27	35. 15. 6	33. 38. 17	32. 1. 56
4	Regulus.	60. 37. 23	59. 2. 6	57. 27. 8	55. 52. 30
5		48. 4. 9	46. 31. 25	44. 58. 58	43. 26. 47
6		35. 49. 35	34. 18. 54	32. 48. 27	31. 18. 12
7		23. 49. 45	22. 20. 36	20. 51. 38	19. 22. 51
8	Spica ♍	65. 58. 46	64. 30. 7	63. 1. 31	61. 32. 55
9		54. 10. 25	52. 41. 57	51. 13. 27	49. 44. 57
10		42. 22. 7	40. 53. 25	39. 24. 39	37. 55. 50
11		30. 30. 44	29. 1. 31	27. 32. 15	26. 2. 55
12		18. 35. 31	17. 6. 3	15. 36. 40	14. 7. 23
13	Antares.	52. 3. 37	50. 31. 44	48. 59. 41	47. 27. 29
14		39. 44. 0	38. 10. 48	36. 37. 25	35. 3. 52
15		27. 13. 21	25. 38. 40	24. 3. 50	22. 28. 47
16	α Aquilæ	72. 15. 3	70. 53. 10	69. 31. 25	68. 9. 48
17		61. 24. 28	60. 4. 13	58. 44. 20	57. 24. 51
18	δ Capricorni.	43. 31. 15	41. 52. 46	40. 14. 7	38. 35. 21
19	α Pegaſi.	80. 28. 37	78. 51. 33	77. 14. 19	75. 36. 58
20		67. 28. 5	65. 49. 57	64. 11. 44	62. 33. 27
21		54. 21. 25	52. 43. 2	51. 4. 45	49. 26. 36
19	The Sun.	117. 43. 44	116. 10. 30	114. 37. 3	113. 3. 22
20		105. 11. 31	103. 36. 28	102. 1. 11	100. 25. 41
21		92. 24. 44	90. 47. 53	89. 10. 47	87. 33. 30
22		79. 23. 48	77. 45. 13	76. 6. 25	74. 27. 26
23		66. 9. 46	64. 29. 40	62. 49. 25	61. 9. 1
24		52. 45. 6	51. 3. 59	49. 22. 47	47. 41. 30
30	Pollux.	42. 17. 23	40. 36. 48	38. 56. 38	37. 16. 56

APRIL 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Pollux.	56. 57. 31	55. 14. 32	53. 32. 1	51. 49. 57
2		43. 26. 34	41. 47. 19	40. 8. 32	38. 30. 16
3		30. 26. 7	28. 50. 50	27. 16. 5	25. 41. 54
4	Regulus.	54. 18. 11	52. 44. 13	51. 10. 34	49. 37. 12
5		41. 54. 53	40. 25. 11	38. 51. 44	37. 20. 32
6		29. 48. 10	28. 18. 18	26. 48. 36	25. 19. 5
7		17. 54. 17	16. 25. 56	14. 57. 46	13. 29. 51
8	Spica ♍	60. 4. 22	58. 35. 52	57. 7. 21	55. 38. 53
9		48. 16. 25	46. 47. 54	45. 19. 20	43. 50. 45
10		36. 26. 57	34. 57. 59	33. 28. 57	31. 59. 52
11		24. 33. 32	23. 4. 2	21. 34. 32	20. 5. 1
12	Antares.	58. 9. 25	56. 38. 13	55. 6. 52	53. 35. 19
13		45. 55. 6	44. 22. 35	42. 49. 53	41. 17. 1
14		33. 30. 8	31. 56. 12	30. 22. 6	28. 47. 49
15	α Aquilæ.	77. 43. 0	76. 20. 59	74. 58. 58	73. 37. 0
16		66. 48. 19	65. 26. 59	64. 5. 54	62. 45. 3
17	β Capricorni.	50. 3. 39	48. 25. 48	46. 47. 47	45. 9. 36
18		36. 56. 25	35. 17. 22	33. 38. 13	31. 58. 58
19	α Pegaſi.	73. 59. 27	72. 21. 48	70. 44. 1	69. 6. 7
20		60. 55. 5	59. 16. 40	57. 38. 15	55. 59. 50
21		47. 48. 34	46. 10. 46	44. 33. 14	42. 55. 58
19	The Sun.	111. 29. 27	109. 55. 18	108. 20. 56	106. 46. 20
20		98. 49. 56	97. 13. 58	95. 37. 47	94. 1. 22
21		85. 55. 59	84. 18. 15	82. 40. 18	81. 2. 10
22		72. 48. 15	71. 8. 54	69. 29. 22	67. 49. 39
23		59. 28. 27	57. 47. 46	56. 6. 59	54. 26. 6
24		46. 0. 10	44. 18. 49	42. 37. 27	40. 56. 2
30	Pollux.	35. 37. 41	33. 58. 53	32. 20. 37	30. 42. 54

Diſtances of ☽'s Center from ⊙, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
2	The Sun.	47. 18. 54	48. 52. 49	50. 26. 20	51. 59. 26
3		59. 38. 50	61. 9. 31	62. 39. 50	64. 9. 45
4		71. 33. 43	73. 1. 27	74. 28. 50	75. 55. 53
5		83. 6. 13	84. 31. 24	85. 56. 19	87. 20. 57
6		94. 20. 26	95. 43. 38	97. 6. 39	98. 29. 28
7		105. 21. 1	106. 42. 52	108. 4. 35	109. 26. 12
8		116. 12. 50	117. 33. 55	118. 54. 55	120. 15. 51
6	Aldebaran.	44. 43. 46	46. 11. 58	47. 40. 6	49. 8. 10
7		56. 27. 28	57. 55. 8	59. 22. 42	60. 50. 15
8		68. 7. 16	69. 34. 34	71. 1. 50	72. 29. 4
9	Pollux.	37. 15. 50	38. 43. 32	40. 11. 19	41. 39. 9
10	Regulus.	11. 59. 35	13. 27. 18	14. 55. 16	16. 23. 30
11		23. 47. 37	25. 16. 54	26. 46. 19	28. 15. 53
12		35. 45. 53	37. 16. 23	38. 47. 2	40. 17. 51
13		47. 54. 10	49. 25. 55	50. 57. 50	52. 29. 56
14		60. 12. 56	61. 46. 3	63. 19. 21	64. 52. 49
15	Spica ♍	18. 48. 3	20. 21. 45	21. 55. 45	23. 30. 1
16		31. 25. 17	33. 1. 2	34. 37. 0	36. 13. 12
17		44. 17. 25	45. 54. 55	47. 32. 37	49. 10. 32
18		57. 23. 12	59. 2. 19	60. 41. 41	62. 21. 14
19	Antares.	24. 51. 52	26. 32. 52	28. 14. 7	29. 55. 33
20		38. 26. 5	40. 8. 51	41. 51. 51	43. 35. 3
21		52. 14. 33	53. 59. 6	55. 43. 53	57. 28. 53
22		66. 17. 8	68. 3. 26	69. 49. 57	71. 36. 41
23	β Capricorni.	26. 11. 46	27. 57. 42	29. 43. 57	31. 30. 33
24		40. 27. 41	42. 15. 48	44. 4. 5	45. 52. 32
25	α Aquilæ.	59. 53. 28	61. 23. 38	62. 54. 24	64. 25. 48
26		72. 9. 4	73. 42. 46	75. 16. 38	76. 50. 40

APRIL 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her

Days.	Stars Names.	12 Hours. ° ′ ″	15 Hours. ° ′ ″	18 Hours. ° ′ ″	21 Hours. ° ′ ″
1	The Sun.	40. 59. 11	42. 34. 44	44. 9. 51	45. 44. 35
2		53. 32. 7	55. 4. 24	56. 36. 16	58. 7. 45
3		65. 39. 18	67. 8. 27	68. 37. 14	70. 5. 39
4		77. 22. 36	78. 48. 58	80. 15. 1	81. 40. 46
5		88. 45. 20	90. 9. 27	91. 33. 21	92. 57. 0
6		99. 52. 6	101. 14. 34	102. 36. 52	103. 59. 1
7		110. 47. 42	112. 9. 6	113. 30. 25	114. 51. 40
6	Aldebaran	50. 36. 10	52. 4. 5	53. 31. 57	54. 59. 44
7		62. 17. 43	63. 45. 10	65. 12. 34	66. 39. 57
8	Pollux.	31. 25. 48	32. 53. 11	34. 20. 40	35. 48. 12
9		43. 7. 5	44. 35. 4	46. 3. 8	47. 31. 15
10	Regulus.	17. 51 57	19. 20. 36	20. 49. 26	22. 18. 27
11		29. 45. 36	31. 15. 26	32. 45. 26	34. 15. 35
12		41. 48. 49	43. 19. 55	44. 51. 10	46. 22. 36
13		54. 2. 11	55. 34. 36	57. 7. 12	58. 39. 59
14		66. 26. 28	68. 0. 18	69. 34. 20	71. 8. 33
15	Spica ♍	25. 4. 34	26. 39. 23	28. 14. 26	29. 49. 44
16		37. 49. 37	39. 26. 14	41. 3. 5	42. 40. 8
17		50. 48. 40	52. 26. 59	54. 5. 31	55. 44. 15
18		64. 1. 2	65. 41. 3	67. 21. 18	69. 1. 48
19	Antares.	31. 37. 14	33. 19. 7	35. 1. 13	36. 43. 32
20		45. 18. 29	47. 2. 10	48. 46. 5	50. 30. 12
21		59. 14. 6	60. 59. 31	62. 45. 11	64. 31. 2
22		73. 23. 37	75. 10. 43	76. 58. 2	78. 45. 31
23	ε Capricorni.	33. 17. 26	35. 4. 38	36. 52. 4	38. 39. 45
24		47. 41. 9	49. 29. 53	51. 18. 44	53. 7. 40
25	α Aquilæ.	65. 57. 35	67. 29. 54	69. 2. 36	70. 35. 39
26		78. 24. 51	79. 59. 9	81. 33. 29	83. 7 45

MAY 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	F.	St. Philip and St. James.
2	Sa.	
3	*Su.*	*2d Sun. Eaſt.* Inv. +
4	M.	From Eaſter in 15 Days,
5	Tu	[1 ret.
6	W.	John ante P.L. Term beg.
7	Th.	
8	F.	
9	Sa.	
10	*Su.*	*3d. Sunday after Eaſter.*
11	M.	From Eaſt. in 3 Weeks,
12	Tu.	[2 ret.
13	W.	
14	Th.	
15	F.	
16	Sa.	
17	*Su.*	*4th Sun. after Eaſt.* [3 ret.
18	M.	From Eaſter in 1 Month,
19	Tu.	Q. Charlotte born, 1744,
20	W.	[Dunſtan.
21	Th.	
22	F.	
23	Sa.	
24	*Su.*	*5 Su. after Eaſt. Rog. Sun.*
25	M.	From Eaſter in 5 W. 4 ret.
26	Tu.	Auguſtin, 1ſt Abp. Cant.
27	W.	Venerable Bede.
28	Th.	Aſcenſion-day, H. Thurſ.
29	F.	K. Charles II. Reſt. Mor-
30	Sa.	[row of Aſcenſ. 5 ret.
31	*Su.*	*Sunday after Aſcenſion day.*

Phaſes of the Moon.

	D.	H.	′
Firſt Quarter —	5.	8.	30
Full Moon ——	13.	8.	26
Laſt Quarter ——	20.	10.	14
New Moon ——	27.	6.	37

Other Phenomena.

D.

1. ☾ 3 poſt ζ ♉ 2^h 13′.
2. ☾ ε ♊ 5^h 12′.
3. ♂ infra Cornu bor. ♉ diff. Lat. 3′.
4. ☾ δ ♋ 13^h 18′.
8. ☾ ν ♌ 10^h 59′.
9. ♃ Stationary.
13. ☾ π ♏ 21^h 10′.
14. ☾ σ ♏ 6^h 0′.
☾ α ♏ 9^h 32′.
♀ infra Cornu bor. ♉ [diff. Lat. 20′.
16. ☾ λ ♐ 8^h 49′.
☾ σ ♐ 19^h 26′.
20. ☾ θ ♒ 11^h 1′.
☉ enters ♊ at 21^h 40′.
23. ♂ ε ♊ diff. Lat. 50′.
24. ☾ η ♓ 5^h 23′.
♀ ε ♊ diff. Lat. 16′.
27. ☌ ♂ ♀ diff. Lat. 37′.
28. ☾ 3 poſt ζ ♉ 11^h 24′
29. ☾ ε ♊ 14^h 11′.
☾ ♂ 22^h 29′: ☾ will eclipſe ♂
30. ☾ ♀ 1^h 49′: ♀ 12′ more North.
31. ☾ δ ♋ 21^h 38′.

MAY 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declination North.	Equat. of Time Sub.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	F.	1. 10. 48. 41	2. 33. 32	15. 5. 18	3. 7	8
2	Sa.	1. 11. 46. 48	2. 37. 21	15. 23. 20	3. 15	8
3	Su.	1. 12. 44. 53	2. 41. 10	15. 41. 6	3. 23	7
4	M.	1. 13. 42. 56	2. 45. 0	15. 58. 36	3. 30	6
5	Tu.	1. 14. 40. 58	2. 48. 51	16. 15. 51	3. 36	5
6	W.	1. 15. 38. 57	2. 52. 42	16. 32. 50	3. 41	4
7	Th.	1. 16. 36. 55	2. 56. 34	16. 49. 32	3. 45	4
8	F.	1. 17. 34. 50	3. 0. 26	17. 5. 57	3. 49	4
9	Sa.	1. 18. 32. 44	3. 4. 19	17. 22. 5	3. 53	3
10	Su.	1. 19. 30. 36	3. 8. 13	17. 37. 56	3. 56	2
11	M.	1. 20. 28. 26	3. 12. 7	17. 53. 29	3. 58	2
12	Tu.	1. 21. 26. 15	3. 16. 1	18. 8. 44	4. 0	1
13	W.	1. 22. 24. 2	3. 19. 56	18. 23. 41	4. 1	1
14	Th.	1. 23. 21. 48	3. 23. 52	18. 38. 19	4. 2	0
15	F.	1. 24. 19. 33	3. 27. 48	18. 52. 39	4. 2	0
16	Sa.	1. 25. 17. 16	3. 31. 45	19. 6. 40	4. 2	1
17	Su.	1. 26. 14. 58	3. 35. 43	19. 20. 21	4. 1	1
18	M.	1. 27. 12. 39	3. 39. 41	19. 33. 43	4. 0	3
19	Tu.	1. 28. 10. 20	3. 43. 39	19. 46. 46	3. 57	2
20	W.	1. 29. 7. 59	3. 47. 39	19. 59. 28	3. 55	3
21	Th.	2. 0. 5. 37	3. 51. 39	20. 11. 50	3. 52	4
22	F.	2. 1. 3. 14	3. 55. 39	20. 23. 51	3. 48	4
23	Sa.	2. 2. 0. 51	3. 59. 40	20. 35. 32	3. 44	5
24	Su.	2. 2. 58. 27	4. 3. 41	20. 46. 51	3. 39	6
25	M.	2. 3. 56. 2	4. 7. 43	20. 57. 49	3. 33	5
26	Tu.	2. 4. 53. 36	4. 11. 45	21. 8. 26	3. 28	7
27	W.	2. 5. 51. 9	4. 15. 48	21. 18. 41	3. 21	7
28	Th.	2. 6. 48. 41	4. 19. 52	21. 28. 34	3. 14	7
29	F.	2. 7. 46. 12	4. 23. 56	21. 38. 4	3. 7	8
30	Sa.	2. 8. 43. 42	4. 28. 0	21. 47. 12	2. 59	8
31	Su.	2. 9. 41. 11	4. 32. 5	21. 55. 57	2. 51	9

MAY 1767.

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	15. 54, 5	1. 5, 9	2. 25, 3	0. 003754	10. 5. 7
7	15. 53, 2	1. 6, 4	2. 24, 9	0. 004349	10. 4. 48
13	15. 52, 0	1. 6, 9	2. 24, 6	0. 004904	10. 4. 29
19	15. 50, 8	1. 7, 3	2. 24, 2	0. 005431	10. 4. 10
25	15. 49, 8	1. 7 8	2. 23 9	0. 005906	10. 3. 51

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Emerſions.		II. Satellite. Emerſions.		III. Satellite.		
D.	h ′ ″	D.	h ′ ″	D.	h ′ ″	
2	7. 37. 49	1	22. 40. 1	6	11* 7. 58	I
4	2. 6. 45	5	11*58. 34	6	14*11. 40	E
5	20. 35. 31	9	1. 16. 59	13	15. 7. 41	I
7	15. 4. 21	12	14*35. 20	13	18. 10. 29	E
9	9*33. 12	16	3. 53. 39	20	19. 6. 59	I
11	4. 1. 52	19	17. 11. 52	20	22. 8. 51	E
12	22. 30. 36	23	6. 30. 1	27	23. 5. 47	I
14	16. 59. 17	26	19. 48. 4	28	2. 6. 43	E
16	11*27. 57	30	9. *6. 6			
18	5. 56. 32					
20	0. 25. 11					
21	18. 53. 44					
23	13*22. 16					
25	7. 50. 46					
27	2. 19. 16					
28	20. 47. 41					
30	15. 16. 10					

IV. Satellite.

5	23. 17. 28	I
6	2. 37. 56	E
22	17. 18. 16	I
22	20. 32. 10	E

MAY 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
MERCURY. greateſt Elong. 17^{d}						
1	8. 2. 55	2. 5 S	0. 24. 1	1. 36 S	7. 50 N	22. 55
7	8 19. 24	3. 53	0. 24. 30	2. 42	6. 58	22. 37
13	9. 6. 13	5. 24	0. 27. 36	3. 17	7. 34	22. 27
19	9. 24. 7	6. 30	1. 2. 57	3. 21	9. 21	22. 24
25	10. 14. 3	6. 59	1. 10. 10	3. 0	12. 2	22. 28
VENUS.						
1	3. 17. 45	1. 51 N	2. 7. 56	0. 55 N	22: 34 N	1. 50
7	3. 27. 29	2. 19	2. 15. 10	1. 10	23. 47	1. 58
13	4. 7. 14	2. 42	2. 22. 24	1. 24	24. 39	2. 6
19	4. 16. 59	3. 0	2. 29. 35	1. 36	25. 4	2. 14
25	4. 26. 45	3. 14	3. 6. 45	1. 46	25: 3	2. 22
MARS.						
1	3. 17. 12	1. 35 N	2. 22. 38	1. 9 N	24. 25 N	2. 55
7	3. 19. 59	1. 38	2. 26. 28	1. 10	24. 36	2. 47
13	3. 22. 44	1. 40	3. 0. 17	1. 11	24. 39	2. 41
19	3. 25. 28	1. 42	3. 4. 7	1. 12	24. 36	2. 34
25	3. 28. 11	1. 44	3. 7. 56	1. 12	24. 26	2. 27
JUPITER.						
1	5. 22. 10	1. 16 N	5. 13. 8	1. 26 N	7. 58 N	8. 25
7	5. 22. 37	1. 16	5. 13. 2	1. 24	7. 58	8. 2
13	5. 23. 4	1. 16	5. 13. 3	1. 23	7. 57	7. 38
19	5. 23. 32	1. 16	5. 13. 10	1. 22	7. 53	7. 15
25	5. 23. 59	1. 17	5. 13. 24	1. 20	7. 47	6. 52
SATURN.						
1	2. 21. 30	1. 15 S	2. 17. 40	1. 9 S	21. 45 N	2. 34
7	2. 21. 44	1. 14	2. 18. 20	1. 8	21. 49	2. 13
13	2. 21. 57	1. 14	2. 19. 4	1. 7	21. 54	1. 53
19	2. 22. 11	1. 13	2. 19. 48	1. 6	21. 59	1. 32
25	2. 22. 24	1. 13	2. 20. 33	1. 6	22. 2	1. 11

Configurations of the SATELLITES of JUPITER at 9 o' th' Clock in the Evening.

1	1.O	·3	⊙	2. ·4
2		2. ·3 1.	⊙	4.
3		·2	⊙	·1 ·3 4.
4		1.	⊙	·2 4. ·3
5	2 ●		⊙	4. 1. 3.
6	3 ●	·2 4. ·1	⊙	
7		4. 3.	⊙	1 ☌ 2
8		4. ·3 ·1	⊙	2.
9		4. ·3 2.	⊙	1 ●
10		·4 ·2	⊙	·1 ·3
11		·4 1.	⊙	·2 ·3
12		·4	⊙	2. ·1 3.
13		·2 ·1 ·4	⊙	3.
14		3.	⊙	·2 1 ☌ 4
15		·3 ·1	⊙	2. ·4
16	1 ●	·3 2.	⊙	·4
17		·2	⊙	·1 ·3 ·4
18		1.	⊙	·2 ·3 4.
19			⊙	2. ·1 3. 4.
20		2. ·1	⊙	3. 4.
21	2.O	3.	⊙	1. 4.
22	4●	3. ·1	⊙	2.
23		4. 3 2.	⊙	1.
24	1.O	4. ·2	⊙	·3
25		4. 1.	⊙	·2 ·3
26		4.	⊙	2. ·1 3.
27		·4 2. 1.	⊙	·3
28		·4 3. ·2	⊙	1.
29		·3 ·4 ·1	⊙	
30	2 ●	·3 ·4	⊙	1.
31	3.O	·2 ·1	⊙	·4

MAY 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	F.	2. 20. 58. 18	2. 27. 30. 21	3. 28. 16 N	3. 2. 4 N
2	Sa.	3. 3. 56. 17	3. 10. 16. 27	2. 33. 54	2. 4. 10
3	Su.	3. 16. 31. 16	3. 22. 41. 20	1. 33. 20	1. 1. 45 N
4	M.	3. 28. 47. 3	4. 4. 49. 9	0. 29. 49 N	0. 2. 9 S
5	Tu.	4. 10. 48. 29	4. 16. 45. 28	0. 33. 51 S	1. 4. 59
6	W.	4. 22. 40. 49	4. 28. 35. 21	1. 35. 18	2. 4. 30
7	Th.	5. 4. 29. 35	5. 10. 24. 19	2. 32. 19	2. 58. 32
8	F.	5. 16. 20. 6	5. 22. 17. 29	3. 22. 51	3. 45. 7
9	Sa.	5. 28. 16. 55	6. 4. 19. 1	4. 4. 55	4. 22. 11
10	Su.	6. 10. 24. 0	6. 16. 32. 23	4. 36. 36	4. 47. 57
11	M.	6. 22. 44. 13	6. 28. 59. 52	4. 55. 56	5. 0. 33
12	Tu.	7. 5. 19. 11	7. 11. 42. 31	5. 1. 28	4. 58. 40
13	W.	7. 18. 9. 39	7. 24. 40. 24	4. 52. 0	4. 41. 31
14	Th.	8. 1. 14. 49	8. 7. 52. 35	4. 27. 8	4. 9. 4
15	F.	8. 14. 33. 26	8. 21. 17. 22	3. 47. 22	3. 22. 21
16	Sa.	8. 28. 3. 53	9. 4. 52. 56	2. 54. 14	2. 23. 28
17	Su.	9. 11. 44. 13	9. 18. 37. 41	1. 50. 23	1. 15. 27
18	M.	9. 25. 32. 59	10. 2. 30. 11	0. 39. 16 S	0. 2. 16 S
19	Tu.	10. 9. 29. 4	10. 16. 29. 37	0. 34. 54 N	1. 11. 46 N
20	W.	10. 23. 31. 37	11. 0. 35. 9	1. 47. 39	2. 21. 58
21	Th.	11. 7. 39. 55	11. 14. 45. 53	2. 54. 17	3. 23. 57
22	F.	11. 21. 52. 41	11. 29. 0. 14	3. 50. 29	4. 13. 27
23	Sa.	0. 6. 8. 2	0. 13. 15. 51	4. 32. 31	4. 47. 23
24	Su.	0. 20. 22. 56	0. 27. 28. 57	4. 57. 41	5. 3. 22
25	M.	1. 4. 33. 19	1. 11. 35. 25	5. 4. 25	5. 0. 51
26	Tu.	1. 18. 34. 36	1. 25. 30. 26	4. 52. 47	4. 40. 30
27	W.	2. 2. 22. 19	2. 9. 9. 54	4. 24. 9	4. 4. 13
28	Th.	2. 15. 52. 47	2. 22. 30. 42	3. 41. 7	3. 15. 16
29	F.	2. 29. 3. 34	3. 5. 31. 22	2. 47. 6	2. 17. 7
30	Sa.	3. 11. 54. 7	3. 18. 12. 6	1. 45. 44	1. 13. 20
31	Su.	3. 24. 25. 27	4. 0. 34. 42	0. 40. 28 N	0. 7. 32 N

MAY 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			h ′	° ′	° ′	° ′	° ′
1	F.	5	2. 53	79. 54	87. 13	26. 38 N	26. 29 N
2	Sa.	6	3. 48	94. 22	101. 21	25. 59	25. 8
3	Su.	7	4. 41	108. 7	114. 41	23. 59	22. 35
4	M.	8	5. 29	121. 2	127. 10	20. 55	19. 4
5	Tu.	9	6. 14	133. 6	138. 53	17. 0	14. 48
6	W.	10	6. 57	144. 30	150. 1	12. 28	10. 2
7	Th.	11	7. 37	155. 26	160. 47	7. 31	4. 55 N
8	F.	12	8. 17	166. 7	171. 26	2. 17 N	0. 23 S
9	Sa.	13	8. 57	176. 48	182. 13	3. 4 S	5. 43
10	Su.	14	9. 39	187. 43	193. 22	8. 22	10. 56
11	M.	15	10. 23	199. 9	205. 6	13. 25	15. 48
12	Tu.	16	11. 11	211. 15	217. 38	18. 3	20. 6
13	W.	17	12. 2	224. 13	231. 4	21. 57	23. 30
14	Th.	18	12. 58	238. 7	245. 22	24. 47	25. 44
15	F.	19	13. 56	252. 45	260. 16	26. 20	26. 33
16	Sa.	20	14. 55	267. 51	275. 25	26. 21	25. 46
17	Su.	21	15. 52	282. 56	290. 22	24. 47	23. 25
18	M.	22	16. 48	297. 39	304. 48	21. 42	19. 40
19	Tu.	23	17. 40	311. 46	318. 35	17. 20	14. 46
20	W.	24	18. 30	325. 15	331. 48	12. 0	9. 4
21	Th.	25	19. 18	338. 16	344. 40	6. 0 S	2. 52 S
22	F.	26	20. 7	351. 2	357. 24	0. 18 N	3. 29 N
23	Sa.	27	20. 58	3. 49	10. 19	6. 37	9. 39
24	Su.	28	21. 49	16. 54	23. 38	12. 34	15. 18
25	M.	29	22. 44	30. 30	37. 31	17. 49	20. 5
26	Tu.	30	23. 40	44. 39	51. 57	22. 3	23. 42
27	W.	1	☌	59. 19	66. 46	24. 59	25. 53
28	Th.	2	0. 39	74. 13	81. 38	26. 23	26. 31
29	F.	3	1. 36	88. 57	96. 8	26. 15	25. 38
30	Sa.	4	2. 30	103. 7	109. 55	24. 41	23. 27
31	Su.	5	3. 20	116. 28	122. 49	21. 57	20. 11

MAY 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ′	′ ″		
1	F.	15. 35	15. 29	57. 13	56. 49	0206	0237
2	Sa.	15. 23	15. 17	56. 26	56. 4	0266	0294
3	Su.	15. 11	15. 6	55. 43	55. 25	0322	0345
4	M.	15. 1	14. 57	55. 8	54. 53	0367	0387
5	Tu.	14. 54	14. 52	54. 43	54. 33	0400	0414
6	W.	14. 50	14. 49	54. 27	54. 24	0422	0426
7	Th.	14. 49	14. 49	54. 22	54. 23	0428	0427
8	F.	14. 50	14. 52	54. 27	54. 33	0422	0414
9	Sa.	14. 54	14. 56	54. 41	54. 50	0403	0391
10	Su.	15. 0	15. 3	55. 2	55. 15	0375	0358
11	M.	15. 7	15. 12	55. 30	55. 46	0339	0318
12	Tu.	15. 16	15. 20	56. 1	56. 17	0298	0278
13	W.	15. 25	15. 29	56. 35	56. 51	0255	0234
14	Th.	15. 34	15. 38	57. 8	57. 24	0213	0192
15	F.	15. 43	15. 47	57. 39	57. 54	0174	0155
16	Sa.	15. 50	15. 53	58. 8	58. 19	0137	0124
17	Su.	15. 57	16. 0	58. 32	58. 43	0107	0094
18	M.	16. 2	16. 5	58. 52	59. 1	0083	0072
19	Tu.	16. 7	16. 9	59. 8	59. 15	0063	0055
20	W.	16. 10	16. 11	59. 21	59. 25	0047	0042
21	Th.	16. 12	16. 13	59. 28	59. 31	0039	0035
22	F.	16. 13	16. 13	59. 32	59. 31	0034	0035
23	Sa.	16. 12	16. 12	59. 29	59. 25	0038	0042
24	Su.	16. 10	16. 8	59. 19	59. 11	0050	0060
25	M.	16. 5	16. 2	59. 2	58. 51	0071	0084
26	Tu.	15. 58	15. 54	58. 37	58. 23	0101	0119
27	W.	15. 50	15. 45	58. 6	57. 48	0140	0162
28	Th.	15. 40	15. 34	57. 29	57. 9	0186	0211
29	F.	15. 29	15. 24	56. 49	56. 30	0237	0261
30	Sa.	15. 18	15. 13	56. 10	55. 51	0287	0311
31	Su.	15. 8	15. 4	55. 34	55. 18	0333	0354

MAY 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Pollux.	29. 5. 44	27. 29. 5	25. 53. 0	24. 17. 32
2	Regulus.	52. 41. 0	51. 5. 21	49. 30. 5	47. 55. 8
3		40. 5. 19	38. 32. 15	36. 59. 30	35. 27. 2
4		27. 48. 59	26. 18. 19	24. 47. 43	23. 17. 22
5		15. 49. 34	14. 20. 54	12. 52. 39	11. 24. 54
6	Spica ♍	57. 53. 42	56. 24. 54	54. 56. 10	53. 27. 28
7		46. 4. 35	44. 36. 2	43. 7. 27	41. 38. 52
8		34. 15. 25	32. 46. 34	31. 17. 40	29. 48. 42
9		22. 23. 2	20. 53. 41	19. 24. 16	17. 54. 55
10	Antares.	55. 55. 50	54. 24. 18	52. 52. 35	51. 20. 39
11		43. 37. 58	42. 4. 44	40. 31. 18	38. 57. 37
12		31. 5. 53	29. 30. 47	27. 55. 27	26. 19. 50
13	α Aquilæ	75. 28. 27	74. 5. 7	72. 41. 48	71. 18. 31
14		64. 23. 16	63. 0. 42	61. 38. 25	60. 16. 28
15	β Capricorni.	46. 57. 47	45. 17. 45	43. 37. 35	41. 57. 16
16		33. 33. 57	31. 53. 2	30. 12. 2	28. 30. 59
17	α Pegaſi.	70. 27. 0	68. 47. 53	67. 8. 45	65. 29. 34
18		57. 14. 7	55. 35. 12	53. 56. 24	52. 17. 46
19	α Arietis.	84. 54. 4	83. 9. 4	81. 23. 58	79. 38. 47
20		70. 51. 50	69. 6. 12	67. 20. 31	65. 34. 46
18	The Sun.	121. 39. 32	120. 2. 40	118. 25. 40	116. 48. 33
19		108. 41. 12	107. 3. 24	105. 25. 31	103. 47. 31
20		95. 36. 13	93. 57. 41	92. 19. 6	90. 40. 26
21		82. 26. 17	80. 47. 17	79. 8. 15	77. 29. 11
22		69. 13. 30	67. 34. 17	65. 55. 5	64. 15. 52
23		56. 0. 8	54. 21. 4	52. 42. 3	51. 3. 6
24		42. 49. 31	41. 11. 5	39. 32. 47	37. 54. 38
29	Regulus.	57. 33. 31	55. 56. 4	54. 18. 55	52. 42. 4
30		44. 42. 27	43. 7. 25	41. 32. 41	39. 58. 15
31		32. 10. 30	30. 37. 49	29. 5. 24	27. 33. 16

MAY 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Pollux.	22. 42. 44	21. 8. 43	19. 35. 36	18. 3. 22
2	Regulus.	46. 20. 32	44. 46. 15	43. 12. 18	41. 38. 39
3		33. 54. 53	32. 23. 2	30. 51. 29	29. 20. 11
4		21. 47. 17	20. 17. 27	18. 47. 53	17. 18. 35
5	Spica ♍	63. 49. 40	62. 20. 32	60. 51. 31	59. 22. 33
6		51. 58. 50	50. 30. 15	49. 1. 40	47. 33. 8
7		40. 10. 15	38. 41. 36	37. 12. 55	35. 44. 11
8		28. 19. 41	26. 50. 35	25. 21. 27	23. 52. 16
9		16. 25. 42	14. 56. 35	13. 27. 39	11. 58. 55
10	Antares.	49. 48. 31	48. 16. 12	46. 43. 40	45. 10. 55
11		37. 23. 43	35. 49. 37	34. 15. 17	32. 40. 42
12	α Aquilæ.	81. 1. 22	79. 38. 13	78. 15. 2	76. 51. 46
13		69. 55. 16	68. 32. 4	67. 8. 59	65. 46. 3
14	β Capricorni.	53. 35. 50	51. 56. 36	50. 17. 11	48. 37. 35
15		40. 16. 48	38. 36. 14	36. 55. 35	35. 14. 49
16	α Pegaſi.	77. 2. 39	75. 23. 54	73. 45. 2	72. 6. 4
17		63. 50. 22	62. 11. 13	60. 32. 8	58. 53. 6
18		50. 39. 20	49. 1. 7	47. 23. 10	45. 45. 30
19	α Arietis.	77. 53. 31	76. 8. 13	74. 22. 50	72. 37. 22
18	The Sun.	115. 11. 18	113. 33. 56	111. 56. 28	110. 18. 53
19		102. 9. 26	100. 31. 15	98. 53. 0	97. 14. 39
20		89. 1. 42	87. 22. 56	85. 44. 6	84. 5. 13
21		75. 50. 5	74. 10. 58	72. 31. 50	70. 52. 41
22		62. 36. 40	60. 57. 29	59. 18. 21	57. 39. 13
23		49. 24. 12	47. 45. 24	46. 6. 40	44. 28. 3
29	Regulus.	51. 5. 33	49. 29. 19	47. 53. 24	46. 17. 46
30		38. 24. 7	36. 50. 17	35. 16. 43	33. 43. 28
31		26. 1. 25	24. 29. 51	22. 58. 36	21. 27. 36

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	40. 17. 4	41. 47. 36	43. 17. 49	44. 47. 41
2		52. 12. 10	53. 40. 6	55. 7. 43	56. 35. 1
3		63. 46. 59	65. 12. 32	66. 37. 50	68. 2. 51
4		75. 4. 8	76. 27. 41	77. 51. 3	79. 14. 12
5		86. 7. 31	87. 29. 41	88. 51. 45	90. 13. 40
6		97. 1. 42	98. 23. 4	99. 44. 24	101. 5. 41
7		107. 51. 33	109. 12. 43	110. 33. 56	111. 55. 11
6	Pollux.	33. 38. 12	35. 5. 55	36. 33. 41	38. 1. 29
7		45. 20. 53	46. 48. 54	48. 16. 58	49. 45. 7
8	Regulus.	20. 5. 37	21. 34. 12	23. 2. 57	24. 31. 52
9		31. 58. 45	33. 28. 38	34. 58. 42	36. 28. 56
10		44. 2. 46	45. 34. 8	47. 5. 42	48. 37. 29
11		56. 19. 34	57. 52. 40	59. 26. 1	60. 59. 35
12	Spica ♍	14. 59. 7	16. 32. 39	18. 6. 38	19. 41. 3
13		27. 38. 53	29. 15. 23	30. 52. 9	32. 29. 12
14		40. 38. 32	42. 17. 11	43. 56. 3	45. 35. 11
15		53. 54. 11	55. 34. 40	57. 15. 21	58. 56. 14
16	Antares.	21. 33. 18	23. 15. 29	24. 57. 49	26. 40. 20
17		35. 15. 20	36. 58. 48	38. 42. 26	40. 26. 11
18		49. 6. 54	50. 51. 25	52. 36. 4	54. 20. 50
19		63. 6. 14	64. 51. 36	66. 37. 5	68. 22. 40
20	β Capricorni.	22. 51. 25	24. 35. 7	26. 19. 13	28. 3. 39
21		36. 48. 55	38. 34. 24	40. 20. 4	42. 5. 50
22	α Aquilæ.	56. 30. 37	57. 57. 4	59. 24. 13	60. 52. 1
23		68. 18. 49	69. 49. 26	71. 20. 22	72. 51. 33
24	α Pegaſi.	32. 42. 45	34. 15. 27	35. 49. 11	37. 23. 48
25		45. 26. 11	47. 3. 56	48. 41. 58	50. 20. 13
31	The Sun.	44. 44. 30	46. 9. 54	47. 35. 5	49. 0. 3

MAY 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	46. 17. 14	47. 46. 27	49. 15. 21	50. 43. 55
2		58. 2. 1	59. 28. 41	60. 55. 4	62. 21. 10
3		69. 27. 37	70. 52. 6	72. 16. 21	73. 40. 21
4		80. 37. 11	82. 0. 0	83. 22. 40	84. 45. 10
5		91. 35. 28	92. 57. 9	94. 18. 44	95. 40. 15
6		102. 26. 55	103. 48. 5	105. 9. 15	106. 30. 24
7		113. 16. 27	114. 37. 43	115. 59. 3	117. 20. 29
5	Pollux.	27. 47. 47	29. 15. 19	30. 42. 54	32. 10. 32
6		39. 29. 18	40. 57. 8	42. 25. 0	43. 52. 55
7	Regulus.	14. 13. 4	15. 40. 55	17. 8. 58	18. 37. 11
8		26. 0. 57	27. 30. 9	28. 59. 31	30. 29. 3
9		37. 59. 21	39. 29. 55	41. 0. 40	42. 31. 37
10		50. 9. 29	51. 41. 40	53. 14. 5	54. 46. 43
11		62. 33. 24	64. 7. 25	65. 41. 40	67. 16. 8
12	Spica ♍	21. 15. 54	22. 51. 9	24. 26. 45	26. 2. 39
13		34. 6. 32	35. 44. 8	37. 22. 0	39. 0. 8
14		47. 14. 32	48. 54. 7	50. 33. 55	52. 13. 56
15		60. 37. 20	62. 18. 37	64. 0. 5	65. 41. 45
16	Antares.	28. 23. 1	30. 5. 52	31. 48. 51	33. 32. 1
17		42. 10. 6	43. 54. 7	45. 38. 15	47. 22. 31
18		56. 5. 43	57. 50. 41	59. 35. 45	61 20. 56
19	β Capricorni.	16. 2. 1	17. 43. 26	19. 25. 31	21. 8. 12
20		29. 48. 22	31. 33. 18	33. 18. 23	35. 3. 36
21	α Aquilæ.	50. 53. 31	52. 16. 22	53. 40. 13	55. 4. 59
22		62. 20. 25	63. 49. 21	65. 18. 45	66. 48. 35
23	α Pegaſi.	26. 46. 19	28. 12. 50	29. 41. 14	31. 11. 17
24		38. 59. 11	40. 35. 11	42. 11. 45	43. 48. 46
25		51. 58. 39	53. 37. 13	55. 15. 51	56. 54. 31
30	The Sun.	39. 0. 38	40. 26. 55	41. 52. 59	43. 18. 51
31		50. 24. 48	51. 49. 20	53. 13. 39	54. 37. 47

JUNE 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	M.	Nicomede, Term ends.
2	Tu.	
3	W.	[Oxford Term ends.
4	Th.	K. George III. born 1738.
5	F.	Boniface.
6	Sa.	
7	*Su.*	*Whit-Sunday.*
8	M.	Whit-Monday.
9	Tu.	Whit-Tueſday.
10	W.	Prs. Amelia born.
11	Th.	St. Barnabas.
12	F.	
13	Sa.	
14	*Su.*	*Trinity-Sunday.* [1 ret.
15	M.	On Morrow of H. Trin.
16	Tu.	[begins.
17	W.	S. Alban, Oxford Term
18	Th.	
19	F.	Trinity Term begins.
20	Sa.	Tranſl. of Edw. K. of W. S.
21	*Su.*	*1ſt Sunday after Trinity.*
22	M.	In 8 Days of H. Trin.
23	Tu.	[2 ret.
24	W.	Nativ. of St. John Bapt.
25	Th.	
26	F.	
27	Sa.	
28	*Su.*	*2d Sunday after Trinity.*
29	M.	St. Peter. In 15 Days of
30	Tu.	[H. Trin. 3 ret.

Phaſes of the Moon.

	D.	H.	′
Firſt Quarter —	4.	2.	24
Full Moon ——	11.	19.	13
Laſt Quarter —	18.	14.	46
New Moon ——	25.	17.	41

Other Phenomena.

D.
4. ☾ υ ♌ $18^{h}\ 57'$.
10. ☾ π ♏ $5^{h}\ 29'$.
☾ σ ♏ $14^{h}\ 15'$.
☾ α ♏ $17^{h}\ 44'$.
12. ☾ λ ♐ $16^{h}\ 12'$.
14. ☾ θ ♒ $14^{h}\ 1'$.
19. ♃ σ ♌ diff. Lat. $26'$.
20. ☾ ν ♓ $11^{h}\ 18'$.
21. ☉ enters ♋ at $6^{h}\ 25'$.
22. ☾ η Pleiadum $21^{h}\ 16'$.
24. ☾ 3 poſt ζ ♉ $19^{h}\ 15'$.
25. ☾ ε ♊ $22^{h}\ 14'$.
28. ☾ δ ♋ $5^{h}\ 39'$.

JUNE 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declination North.	Equat. of Time Sub.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	M.	2. 10. 38. 38	4. 36. 11	22. 4. 20	2. 42	8
2	Tu.	2. 11. 36. 4	4. 40. 16	22. 12. 19	2. 34	10
3	W.	2. 12. 33. 30	4. 44. 22	22. 19. 55	2. 24	9
4	Th.	2. 13. 30. 54	4. 48. 29	22. 27. 8	2. 15	10
5	F.	2. 14. 28. 16	4. 52. 35	22. 33. 58	2. 5	11
6	Sa.	2. 15. 25. 38	4. 56. 42	22. 40. 23	1. 54	11
7	*Su.*	2. 16. 22. 58	5. 0. 50	22. 46. 25	1. 43	11
8	M.	2. 17. 20. 18	5. 4. 57	22. 52. 3	1. 32	12
9	Tu.	2. 18. 17. 37	5. 9. 5	22. 57. 17	1. 20	11
10	W.	2. 19. 14. 54	5. 13. 13	23. 2. 6	1. 9	12
11	Th.	2. 20. 12. 11	5. 17. 21	23. 6. 31	0. 57	12
12	F.	2. 21. 9. 27	5. 21. 30	23. 10. 33	0. 45	12
13	Sa.	2. 22. 6. 43	5. 25. 39	3. 14. 9	0. 33	13
14	*Su.*	2. 23. 3. 58	5. 29. 47	23. 17. 20	0. 20	12
15	M.	2. 24. 1. 12	5. 33. 56	23. 20. 9	0. 8	13
16	Tu.	2. 24. 58. 28	5. 38. 6	23. 22. 32	Add. 5	13
17	W.	2. 25. 55. 43	5. 42. 15	23. 24. 30	0. 18	12
18	Th.	2. 26. 52. 57	5. 46. 24	23. 26. 4	0. 30	14
19	F.	2. 27. 50. 12	5. 50. 34	23. 27. 12	0. 44	12
20	Sa.	2. 28. 47. 26	5. 54. 44	23. 27. 56	0. 56	13
21	*Su.*	2. 29. 44. 41	5. 58. 53	23. 28. 15	1. 9	14
22	M.	3. 0. 41. 55	6. 3. 2	23. 28. 9	1. 23	12
23	Tu.	3. 1. 39. 9	6. 7. 12	23. 27. 39	1. 35	13
24	W.	3. 2. 36. 24	6. 11. 21	23. 26. 43	1. 48	13
25	Th.	3. 3. 33. 38	6. 15. 31	23. 25. 23	2. 1	13
26	F.	3. 4. 30. 52	6. 19. 40	23. 23. 38	2. 14	12
27	Sa.	3. 5. 28. 6	6. 23. 50	23. 21. 29	2. 26	12
28	*Su.*	3. 6. 25. 20	6. 27. 59	23. 18. 54	2. 38	13
29	M.	3. 7. 22. 34	6. 32. 7	23. 15. 55	2. 51	12
30	Tu.	3. 8. 19. 47	6. 36. 16	23. 12. 32	3. 3	11

JUNE 1767.

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	15. 48, 8	1. 8, 3	2. 23, 6	0. 006356	10. 3. 28
7	15. 48, 1	1. 8, 5	2. 23, 3	0. 006657	10. 3. 9
13	15. 47, 5	1. 8, 7	2. 23, 2	0. 006898	10. 2. 50
19	15. 47, 1	1. 8, 8	2. 23, 0	0. 007096	10. 2. 31
25	15. 47, 0	1. 8, 8	2. 23, 0	0. 007217	10. 2. 12

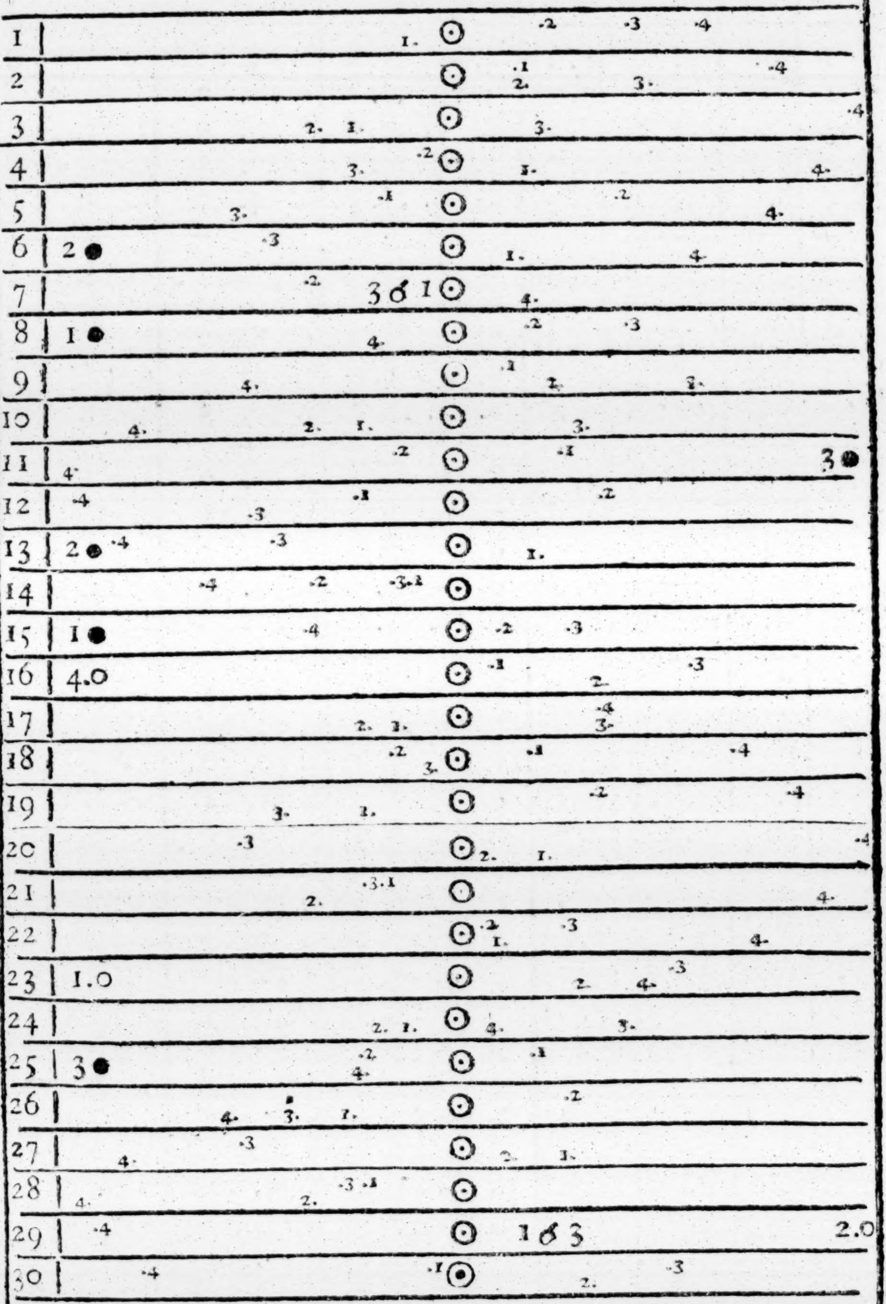
Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Emerſions.		II. Satellite. Emerſions.		III. Satellite.	
Days	h ′ ″	Days	h ′ ′	Day	h ′ ″
1	9*44. 32	2	22. 24. 3	4	3. 4. 16 I
3	4. 12. 59	6	11*42. 1	4	6. 4. 18 E
4	22. 41. 26	10	0. 59. 51	11	7. 2. 23 I
6	17. 9. 43	13	14. 17. 37	11	10* 1. 29 E
8	11*38. 5	17	3. 35. 27	18	11* 0. 22 I
10	6. 6. 20	20	16. 53. 16	18	13. 58. 30 E
12	0. 34. 42	24	6. 11. 12	25	14. 58. 16 I
13	19. 2. 56	27	19. 29. 15	25	17. 55. 24 E
15	13. 31. 15				
17	7. 59. 37			IV. Satellite.	
19	2. 27. 47				
20	20. 56. 2			8	11*17. 11 I
22	15. 24. 20			8	14. 24. 21 E
24	9*52. 36			25	5. 14. 37 I
26	4. 20. 49			25	8. 14. 37 E
27	22. 49. 2				
29	17. 17. 21				

JUNE 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
			MERCURY.			sup. ☌ 20^d 8^h
1	11. 11. 22	6. 18 S	1. 20. 37	2. 10 S	15. 50 N	22. 41
7	0. 9. 45	4. 7	2. 1. 14	1. 10	19. 17	22. 59
13	1. 13. 26	0. 17	2. 13. 15	0. 4	22. 22	23. 26
19	2. 20. 49	4. 2 N	2. 26. 13	0. 56 N	24. 21	23. 57
25	3. 27. 31	6. 39	3. 9. 14	1. 37	24. 46	0. 25
			VENUS.			
1	5. 8. 7	3. 22 N	3. 15. 4	1. 54 N	24. 32 N	2. 30
7	5. 17. 52	3. 23	3. 22. 8	1. 59	23. 37	2. 36
13	5. 27. 35	3. 18	3. 29. 11	2. 0	22. 19	2. 40
19	6. 7. 17	3. 8	4. 6. 9	1. 58	20. 40	2. 45
25	6. 16. 58	2. 52	4. 13. 5	1. 52	18. 42	2. 50
			MARS.			
1	4. 1. 20	1. 46 N	3. 12. 22	1. 12 N	24. 5 N	2. 18
7	4. 4. 2	1. 48	3. 16. 10	1. 12	23. 41	2. 10
13	4. 6. 43	1. 49	3. 19. 58	1. 12	23. 10	2. 1
19	4. 9. 23	1. 50	3. 23. 46	1. 12	22. 33	1. 53
25	4. 12. 2	1. 50	3. 27. 34	1. 12	21. 51	1. 44
			JUPITER.			□ 4^d 12^h 40′
1	5. 24. 31	1. 17 N	5. 13. 47	1. 19 N	7. 36 N	6. 26
7	5. 24. 58	1. 17	5. 14. 13	1. 18	7. 25	6. 3
13	5. 25. 26	1. 17	5. 14. 46	1. 17	7. 12	5. 40
19	5. 25. 53	1. 17	5. 15. 22	1. 15	6. 56	5. 17
25	5. 26. 20	1. 17	5. 16. 4	1. 14	6. 38	4. 54
			SATURN.			☌ 14^d 2^h
1	2. 22. 40	1. 12 S	2. 21. 27	1. 5 S	22. 7 N	0. 47
7	2. 22. 53	1. 12	2. 22. 14	1. 4	22. 11	0. 25
13	2. 23. 7	1. 11	2. 23. 1	1. 4	22. 13	0. 4
19	2. 23. 20	1. 11	2. 23. 48	1. 3	22. 16	23. 39
25	2. 23. 34	1. 10	2. 24. 34	1. 3	22. 18	23. 17

Configurations of the SATELLITES of JUPITER at 10 o' th' Clock in the Evening.



JUNE 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	M.	4. 6. 40. 15	4. 12. 42. 26	0. 25. 26 S	0. 57. 36 S
2	Tu.	4. 18. 41. 59	4. 24. 39. 26	1. 29. 0	1. 59. 14
3	W.	5. 0. 35. 26	5. 6. 30. 39	2. 28. 9	2. 55. 22
4	Th.	5. 12. 25. 34	5. 18. 21. 4	3. 20. 43	3. 43. 50
5	F.	5. 24. 17. 35	6. 0. 15. 56	4. 4. 47	4. 23. 6
6	Sa.	6. 6. 16. 32	6. 12. 20. 6	4. 38. 37	4. 51. 9
7	Su.	6. 18. 27. 2	6. 24. 37. 45	5. 0. 29	5. 6. 24
8	M.	7. 0. 52. 45	7. 7. 12. 16	5. 8. 47	5. 7. 29
9	Tu.	7. 13. 36. 30	7. 20. 5. 40	5. 2. 16	4. 53. 11
10	W.	7. 26. 39. 39	8. 3. 18. 30	4. 40. 3	4. 23. 3
11	Th.	8. 10. 2. 3	8. 16. 50. 2	4. 2. 7	3. 37. 33
12	F.	8. 23. 42. 4	9. 0. 37. 50	3. 9. 38	2. 38. 39
13	Sa.	9. 7. 36. 55	9. 14. 38. 44	2. 4. 55	1. 29. 3
14	Su.	9. 21. 42. 49	9. 28. 48. 44	0. 51. 37 S	0. 13. 10 S
15	M.	10. 5. 56. 0	10. 13. 4. 1	0. 25. 38 N	1. 4. 10 N
16	Tu.	10. 20. 12. 37	10. 27. 21. 17	1. 41. 44	2. 17. 45
17	W.	11. 4. 29. 42	11. 11. 37. 29	2. 51. 35	3. 22. 40
18	Th.	11. 18. 44. 25	11. 25. 50. 18	3. 50. 36	4. 14. 54
19	F.	0. 2. 54. 56	0. 9. 58. 1	4. 35. 12	4. 51. 17
20	Sa.	0. 16. 59. 18	0. 23. 58. 37	5. 2. 55	5. 9. 57
21	Su.	1. 0. 55. 42	1. 7. 50. 24	5. 12. 27	5. 10. 22
22	M.	1. 14. 42. 21	1. 21. 31. 28	5. 3. 50	4. 53. 1
23	Tu.	1. 28. 17. 19	2. 4. 59. 52	4. 38. 12	4. 19. 41
24	W.	2. 11. 39. 1	2. 18. 14. 28	3. 57. 43	3. 32. 48
25	Th.	2. 24. 46. 0	3. 1. 13. 50	3. 5. 19	2. 35. 42
26	F.	3. 7. 37. 41	3. 13. 57. 43	2. 4. 20	1. 31. 45
27	Sa.	3. 20. 13. 53	3. 26. 26. 33	0. 58. 22 N	0. 24. 30 N
28	Su.	4. 2. 35. 46	4. 8. 41. 47	0. 9. 20 S	0. 42. 48 S
29	M.	4. 14. 44. 53	4. 20. 45. 32	1. 15. 32	1. 47. 11
30	Tu.	4. 26. 44. 1	5. 2. 40. 57	2. 17. 34	2. 46. 19

JUNE 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			h ′	° ′	° ′	° ′	° ′
1	M.	6	4. 7	128. 57	134. 54	18. 13 N	16. 6 N
2	Tu.	7	4. 51	140. 40	146. 17	13. 50	11. 27
3	W.	8	5. 32	151. 46	157. 10	8. 58	6. 25
4	Th.	9	6. 11	162. 30	167. 50	3. 48 N	1. 10 N
5	F.	10	6. 51	173. 9	178. 30	1. 28 S	4. 8 S
6	Sa.	11	7. 31	183. 55	189. 26	6. 45	9. 21
7	Su.	12	8. 14	195. 4	200. 52	11. 52	14. 18
8	M.	13	8. 59	206. 52	213. 5	16. 37	18. 46
9	Tu.	14	9. 49	219. 31	226. 13	20. 45	22. 29
10	W.	15	10. 43	233. 10	240. 21	23. 58	25. 9
11	Th.	16	11. 41	247. 44	255. 18	25. 58	26. 26
12	F.	17	12. 40	262. 58	270. 42	26. 29	26. 7
13	Sa.	18	13. 39	278. 26	286. 5	25. 20	24. 9
14	Su.	19	14. 37	293. 37	301. 0	22. 34	20. 39
15	M.	20	15. 32	308. 12	315. 13	18. 24	15. 53
16	Tu.	21	16. 23	322. 4	328. 46	13. 9	10. 15
17	W.	22	17. 13	335. 19	341. 46	7. 13	4. 5 S
18	Th.	23	18. 1	348. 8	354. 29	0. 55 S	2. 14 N
19	F.	24	18. 49	0. 51	7. 14	5. 22 N	8. 25
20	Sa.	25	19. 40	13. 40	20. 13	11. 21	14. 7
21	Su.	26	20. 32	26. 54	33. 42	16. 41	19. 1
22	M.	27	21. 27	40. 38	47. 43	21. 6	22. 53
23	Tu.	28	22. 23	54. 54	62. 11	24. 20	25. 25
24	W.	29	23. 19	69. 31	76. 52	26. 9	26. 29
25	Th.	1	☌	84. 10	91. 22	26. 27	26. 4
26	F.	2	0. 15	98. 27	105. 21	25. 19	24. 16
27	Sa.	3	1. 7	112. 3	118. 33	22. 54	21. 18
28	Su.	4	1. 55	124. 51	130. 56	19. 28	17. 25
29	M.	5	2. 40	136. 51	142. 35	15. 14	12. 54
30	Tu.	6	3. 23	148. 10	153. 39	10. 28	7. 57

JUNE 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor.Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logistic Logar. at Noon.	Logistic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	M.	15. 0	14. 57	55. 4	54. 51	0373	0390
2	Tu.	14. 54	14. 52	54. 41	54. 34	0403	0412
3	W.	14. 50	14. 50	54. 28	54. 25	0420	0424
4	Th.	14. 50	14. 51	54. 25	54. 28	0424	0420
5	F.	14. 52	14. 54	54. 32	54. 40	0415	0404
6	Sa.	14. 56	14. 59	54. 49	55. 1	0392	0377
7	Su.	15. 4	15. 7	55. 16	55. 31	0357	0337
8	M.	15. 13	15. 18	55. 50	56. 9	0313	0288
9	Tu.	15. 24	15. 29	56. 30	56. 51	0261	0234
10	W.	15. 35	15. 41	57. 12	57. 34	0208	0180
11	Th.	15. 47	15. 51	57. 54	58. 13	0155	0131
12	F.	15. 57	16. 1	58. 32	58. 48	0107	0088
13	Sa.	16. 5	16. 9	59. 3	59. 15	0069	0055
14	Su.	16. 11	16. 14	59. 25	59. 33	0042	0033
15	M.	16. 15	16. 16	59. 38	59. 42	0027	0022
16	Tu.	16. 16	16. 16	59. 42	59. 41	0022	0023
17	W.	16. 15	16. 14	59. 39	59. 35	0025	0030
18	Th.	16. 13	16. 11	59. 29	59. 22	0038	0046
19	F.	16. 9	16. 6	59. 15	59. 6	0055	0066
20	Sa.	16. 4	16. 1	58. 56	58. 46	0078	0090
21	Su.	15. 58	15. 55	58. 35	58. 23	0104	0119
22	M.	15. 51	15. 48	58. 11	57. 58	0134	0150
23	Tu.	15. 44	15. 40	57. 44	57. 29	0167	0186
24	W.	15. 36	15. 31	57. 14	56. 58	0205	0225
25	Th.	15. 27	15. 22	56. 43	56. 27	0244	0265
26	F.	15. 19	15. 14	56. 11	55. 55	0285	0306
27	Sa.	15. 10	15. 6	55. 41	55. 25	0324	0345
28	Su.	15. 2	14. 59	55. 12	55. 0	0362	0378
29	M.	14. 56	14. 54	54. 49	54. 39	0392	0406
30	Tu.	14. 51	14. 50	54. 31	54. 25	0416	0424

JUNE 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Regulus.	19. 56. 55	18. 26. 37	16. 56. 40	15. 27. 6
2	Spica ♍	61. 52. 31	60. 22. 50	58. 53. 18	57. 23. 54
3		49. 58. 31	48. 29. 41	47. 0. 55	45. 32. 12
4		38. 9. 29	36. 40. 57	35. 12. 25	33. 43. 52
5		26. 21. 7	24. 52. 29	23. 23. 50	21. 55. 9
6	Antares.	60. 2. 18	58. 31. 56	57. 1. 23	55. 30. 40
7		47. 54. 5	46. 22. 7	44. 49. 54	43. 17. 27
8		35. 31. 15	33. 57. 13	32. 22. 52	30. 48. 14
9	α Aquilæ	79. 25. 57	78. 2. 28	76. 38. 53	75. 15. 11
10		68. 15. 53	66. 52. 2	65. 28. 17	64. 4. 40
11	β Capricorni.	51. 27. 22	49. 46. 24	48. 5. 11	46. 23. 43
12		37. 52. 52	36. 10. 6	34. 27. 9	32. 44. 3
13	α Pegaſi.	74. 22. 59	72. 41. 37	71. 0. 11	69. 18. 39
14		60. 50. 34	59. 8. 59	57. 27. 31	55. 46. 10
15		47. 22. 14	45. 42. 21	44. 2. 54	42. 23. 56
16	α Arietis.	74. 8. 56	72. 21. 49	70. 34. 45	68. 47. 42
17		59. 53. 13	58. 6. 32	56. 19. 57	54. 33. 29
18		45. 42. 42	43. 56. 54	42. 11. 16	40. 25. 47
17	The Sun.	111. 24. 20	109. 44. 26	108. 4. 36	106. 24. 54
18		98. 7. 26	96. 28. 11	94. 49. 2	93. 9. 58
19		84. 56. 15	83. 17. 50	81. 39. 33	80. 1. 23
20		71. 52. 32	70. 15. 10	68. 37. 55	67. 0. 51
21		58. 57. 33	57. 21. 21	55. 45. 19	54. 9. 26
22		46. 12. 30	44. 37. 36	43. 2. 54	41. 28. 23
23					
28	Spica ♍	78. 0. 37	76. 28. 36	74. 56. 45	73. 25. 7
29		65. 49. 46	64. 19. 14	62. 48. 50	61. 18. 37
30		53. 49. 46	52. 20. 23	50. 51. 7	49. 21. 58

JUNE 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours. ° ′ ″	15 Hours. ° ′ ″	18 Hours. ° ′ ″	21 Hours. ° ′ ″
1	Spica ♍	67. 52. 45	66. 22. 29	64. 52. 22	63. 22. 22
2		55. 54. 38	54. 25. 28	52. 56. 23	51. 27. 25
3		44. 3. 34	42. 35. 0	41. 6. 29	39. 37. 59
4		32. 15. 20	30. 46. 48	29. 18. 15	27. 49. 41
5		20. 26. 29	18. 57. 53	17. 29. 19	16. 0. 49
6	Antares.	53. 59. 46	52. 28. 40	50. 57. 21	49. 25. 49
7		41. 44. 45	40. 11. 46	38. 38. 32	37. 5. 1
8	α Aquilæ.	84. 58. 8	83. 35. 22	82. 12. 25	80. 49. 17
9		73. 51. 24	72. 27. 32	71. 3. 39	69. 39. 46
10	β Capricorni.	58. 8. 22	56. 28. 33	54. 48. 26	53. 8. 3
11		44. 42. 0	43. 0. 2	41. 17. 51	39. 35. 28
12	α Pegaſi.	81. 7. 6	79. 26. 17	77. 45. 20	76. 4. 14
13		67. 37. 4	65. 55. 26	64. 13. 48	62. 32. 11
14		54. 4. 56	52. 23. 52	50. 43. 2	49. 2. 29
15		40. 45. 30	39. 7. 44	37. 30. 42	35. 54. 27
16	α Arietis.	67. 0. 42	65. 13. 44	63. 26. 50	61. 39. 59
17		52. 47. 6	51. 0. 49	49. 14. 39	47. 28. 37
18		38. 40. 27	36. 55. 16	35. 10. 19	33. 25. 34
16	The Sun.	118. 4. 30	116. 24. 22	114. 44. 18	113. 4. 17
17		104. 45. 15	103. 5. 40	101. 26. 11	99. 46. 47
18		91. 31. 1	89. 42. 9	88. 13. 25	86. 34. 46
19		78. 23. 21	76. 45. 27	75. 7. 40	73. 30. 2
20		65. 23. 53	63. 47. 5	62. 10. 25	60. 33. 55
21		52. 33. 43	50. 58. 10	49. 22. 46	47. 47. 33
22		39. 54. 4			
27	Spica ♍	84. 10. 48	82. 37. 57	81. 5. 18	79. 32. 52
28		71. 53. 40	70. 22. 25	68. 51. 21	67. 20. 28
29		59. 48. 33	58. 18. 39	56. 48. 53	55. 19. 16
30		47. 52. 56	46. 24. 0	44. 55. 10	42. 26. 26

JUNE 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	56. 1. 41	57. 25. 22	58. 48. 53	60. 12. 13
2		67. 6. 24	68. 28. 48	69. 51. 5	71. 13. 15
3		78. 2. 37	79. 24. 16	80. 45. 52	82. 7. 26
4		88. 54. 48	90. 16. 17	91. 37. 48	92. 59. 22
5		99. 47. 48	101. 9. 45	102. 31. 48	103. 53. 58
6		110. 46. 37	112. 9. 35	113. 32. 45	114. 56. 7
4	Regulus.	16. 16. 5	17. 43. 55	19. 11. 53	20. 39. 59
5		28. 2. 28	29. 31. 22	31. 0. 24	32. 29. 35
6		39. 57. 43	41. 27. 51	42. 58. 11	44. 28. 42
7		52. 4. 28	53. 36. 17	55. 8. 20	56. 40. 40
8	Spica ♍	10. 42. 46	12. 13. 44	13. 45. 27	15. 17. 54
9		23. 9. 6	24. 44. 46	26. 20. 49	27. 57. 17
10		36. 5. 5	37. 43. 43	39. 22. 42	41. 2. 1
11		49. 23. 36	51. 4. 52	52. 46. 26	54. 28. 18
12	Antares.	17. 11. 25	18. 55. 9	20. 39. 6	22. 23. 20
13		31. 7. 48	32. 53. 19	34. 39. 0	36. 24. 52
14		45. 16. 33	47. 3. 17	48. 50. 8	50. 37. 6
15		59. 33. 12	61. 20. 34	63. 7. 58	64. 55. 25
16	β Capricorni.	19. 35. 15	21. 19. 58	23. 4. 59	24. 50. 16
17		33. 39. 26	35. 25. 31	37. 11. 36	38. 57. 43
18	α Aquilæ.	53. 53. 40	55. 18. 42	56. 44. 25	58. 10. 48
19		65. 30. 37	66. 59. 47	68. 29. 13	69. 58. 55
20	α Pegaſi.	29. 44. 12	31. 13. 18	32. 43. 38	34. 15. 0
21		42. 3. 12	43. 38. 25	45. 13. 56	46. 49. 44
22		54. 51. 49	56. 28. 32	58. 5. 18	59. 42. 5
23	α Arietis.	24. 15. 38	25. 54. 26	27. 33. 13	29. 12. 1
24		37. 25. 4	39. 3. 21	40. 41. 28	42. 19. 26
30	The Sun.	48. 46. 41	49. 49. 2	51. 11. 17	52. 33. 27

JUNE 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	61. 35. 22	62. 58. 20	64. 21. 11	65. 43. 51
2		72. 35. 19	73. 57. 15	75. 19. 7	76. 40. 54
3		83. 28. 57	84. 50. 25	86. 11. 53	87. 33. 20
4		94. 20. 57	95. 42. 34	97. 4. 14	98. 25. 59
5		105. 16. 15	106. 38. 37	108. 1. 9	109. 23. 48
6		116. 19. 41	117. 43. 24	119. 7. 21	120. 31. 30
4	Regulus.	22. 8. 13	23. 36. 35	25. 5. 4	26. 33. 42
5		33. 58. 55	35. 28. 22	36. 57. 59	38. 17. 46
6		45. 59. 26	47. 30. 21	49. 1. 31	50. 32. 52
7		58. 13. 13	59. 46. 3	61. 19. 9	62. 52. 33
8	Spica ♍	16. 51. 1	18. 24. 46	19. 59. 4	21. 33. 51
9		29. 34. 9	31. 11. 21	32. 48. 54	34. 26. 49
10		42. 41. 41	44. 21. 41	46. 2. 0	47. 42. 38
11		56. 10. 29	57. 52. 56	59. 35. 39	61. 18. 40
12	Antares.	24. 7. 46	25. 52. 26	27. 37. 22	29. 22. 27
13		38. 10. 55	39. 57. 7	41. 43. 27	43. 29. 56
14		52. 24. 10	54. 11. 19	55. 58. 33	57. 45. 50
15		66. 42. 53	68. 30. 25	70. 17. 56	72. 5. 28
16	δ Capricorni.	26. 35. 47	28. 21. 31	30. 7. 24	31. 53. 23
17		40. 43. 50	42. 29. 56	44. 15. 58	46. 1. 59
18	α Aquilæ.	59. 37. 47	61. 5. 20	62. 33. 21	64. 1. 47
19		71. 28. 50	72. 58. 56	74. 29. 11	75. 59. 32
20	α Pegaſi.	35. 47. 16	37. 20. 19	38. 54. 4	40. 28. 23
21		48. 25. 54	50. 2. 11	51. 38. 36	53. 15. 9
22		61. 18. 54	62. 55. 40	64. 32. 23	66. 9. 1
23	α Arietis.	30. 50. 46	32. 29. 29	34. 8. 6	35. 46. 38
29	The Sun.	42. 56. 10	44. 18. 58	45. 41. 39	47. 4. 13
30		53. 55. 30	55. 17. 28	56. 39. 21	58. 1. 9

JULY 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	W.	
2	Th.	Viſitation of V. Mary.
3	F.	
4	Sa.	Tranſl. of S. Martin.
5	*Su.*	*3d. Sunday after Trinity.*
6	M.	In 3 Weeks of H. Trin.
7	Tu.	Cambridge Com. [4 ret.
8	W.	Term ends.
9	Th.	
10	F.	Cambridge Term ends.
11	Sa.	
12	*Su.*	*4th Sunday after Trinity.*
13	M.	Oxford Act.
14	Tu.	
15	W.	Swithin.
16	Th.	
17	F.	
18	Sa.	Oxford Term ends.
19	*Su.*	*5th Sunday after Trinity.*
20	M.	Margaret.
21	Tu.	
22	W.	Prs. Car. Matil. born
23	Th.	[1751. Magdalen.
24	F.	
25	Sa.	St. James.
26	*Su.*	*6th Sunday after Trinity.*
27	M.	[St. Anne.
28	Tu.	
29	W.	
30	Th.	
31	F.	

Phaſes of the Moon,

	D.	H.	′
Firſt Quarter —	3.	19.	21
Full Moon —	11.	4.	11
Laſt Quarter —	17.	19.	39
New Moon —	25.	6.	50

Other Phenomena.

D.
2. ♂ η ♋ at 7^h diff. Lat. $21'$
6. ♀ α ♌ at 21^h diff. Lat. $63'$
7. ☾ π ♏ 14^h $44'$.
☾ σ ♏ at 23^h $34'$
8. ☾ α ♏ 3^h $4'$
10. ☾ λ ♐ 1^h $26'$
13. ☾ θ ♒ 23^h $28'$
17. ☾ η ♓ 16^h $39'$
20. ☾ η Pleiadum 2^h $53'$
♀ χ ♌ at 3^h diff. Lat. $31'$
♄ H ♊ diff. Lat. $50'$
22. ☉ enters ♌ at 17^h $13'$
☿ α ♌ diff. Lat. $40'$
23. ☾ ε ♊ 4^h $54'$
25. ☉ eclipſed inviſible in *England*: begins at Sun-riſe in Lat. 19° 16′ ſouth, Long. 141° 45′ weſt of Greenwich: ends at Sunſet in Lat. 3° 23′ ſouth, Long. 60° 5′ weſt: centrally eclipſed in the Meridian in Lat. 1° 15′ ſouth.
29. ☾ υ ♌ 9^h $54'$

JULY 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declin. North.	Equat. of Time Add.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	W.	3. 9. 17. 0	6. 40. 25	23. 8. 44	3. 14	12
2	Th.	3. 10. 14. 13	6. 44. 33	23. 4. 32	3. 26	11
3	F.	3. 11. 11. 25	6. 48. 41	22. 59. 56	3. 37	12
4	Sa.	3. 12. 8. 38	6. 52. 49	22. 54. 56	3. 49	10
5	Su.	3. 13. 5. 49	6. 56. 56	22. 49. 32	3. 59	10
6	M.	3. 14. 3. 1	7. 1. 3	22. 43. 44	4. 9	10
7	Tu.	3. 15. 0. 13	7. 5. 9	22. 37. 32	4. 19	10
8	W.	3. 15. 57. 24	7. 9. 15	22. 30. 57	4. 29	9
9	Th.	3. 16. 54. 36	7. 13. 21	22. 23. 59	4. 38	9
10	F.	3. 17. 51. 49	7. 17. 26	22. 16. 38	4. 47	8
11	Sa.	3. 18. 48. 59	7. 21. 31	22. 8. 53	4. 55	8
12	Su.	3. 19. 46. 11	7. 25. 36	22. 0. 45	5. 3	8
13	M.	3. 20. 43. 24	7. 29. 39	21. 52. 14	5. 11	7
14	Tu.	3. 21. 40. 37	7. 33. 43	21. 43. 23	5. 18	6
15	W.	3. 22. 37. 51	7. 37. 46	21. 34. 8	5. 24	6
16	Th.	3. 23. 35. 6	7. 41. 49	21. 24. 31	5. 30	6
17	F.	3. 24. 32. 21	7. 45. 51	21. 14. 32	5. 36	5
18	Sa.	3. 25. 29. 36	7. 49. 52	21. 4. 12	5. 41	5
19	Su.	3. 26. 26. 54	7. 53. 53	20. 53. 30	5. 46	4
20	M.	3. 27. 24. 12	7. 57. 54	20. 42. 27	5. 50	3
21	Tu.	3. 28. 21. 31	8. 1. 54	20. 31. 2	5. 53	3
22	W.	3. 29. 18. 51	8. 5. 54	20. 19. 17	5. 56	2
23	Th.	4. 0. 16. 12	8. 9. 52	20. 7. 11	5. 58	2
24	F.	4. 1. 13. 34	8. 13. 51	19. 54. 45	6. 0	1
25	Sa.	4. 2. 10. 56	8. 17. 49	19. 42. 0	6. 1	1
26	Su.	4. 3. 8. 19	8. 21. 46	19. 28. 54	6. 2	0
27	M.	4. 4. 5. 44	8. 25. 43	19. 15. 29	6. 2	0
28	Tu.	4. 5. 3. 8	8. 29. 39	19. 1. 45	6. 2	1
29	W.	4. 6. 0. 34	8. 33. 34	18. 47. 42	6. 1	2
30	Th.	4. 6. 58. 0	8. 37. 29	18. 33. 20	5. 59	3
31	F.	4. 7. 55. 27	8. 41. 23	18. 18. 41	5. 56	3

JULY 1767.

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	15. 46,9	1. 8,7	2. 23,0	0,007244	10. 1. 53
7	15. 47,0	1. 8,4	2. 23,0	0,007182	10. 1. 34
13	15. 47,2	1. 8,0	2. 23,1	0,007066	10. 1. 15
19	15. 47,6	1. 7,6	2. 23,2	0,006894	10. 0. 56
25	15. 48,2	1. 7,2	2. 23,4	0,006653	10. 0. 37

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Emerſions.

Days	h ′ ″
1	11. 45. 39
3	6. 13. 56
5	0. 42. 13
6	19. 10. 35
8	13. 38. 51
10	8. 7. 12
12	2. 35. 37
13	21. 3. 58
15	15. 32. 23
17	10. *0. 50
19	4. 29. 17
20	22. 57. 44
22	17. 26. 16
24	11. 54. 48
26	6. 23. 19
28	0. 51. 51
29	19. 20. 33
31	13. 49. 8

II. Satellite. Emerſions.

Days	h ′ ″
1	8*47. 1
4	22. 4. 55
8	11. 22. 55
12	0. 41. 1
15	13. 59. 14
19	3. 17. 29
22	16. 35. 51
26	5. 54. 26
29	19. 13. 0

III. Satellite.

Days	h ′ ″	
2	18. 56. 14	I
2	21. 52. 24	E
9	22. 54. 25	I
10	1. 49. 37	E
17	2. 52. 56	I
17	5. 47. 10	E
24	6. 51. 47	I
24	9. 45. 1	E
31	10. 51. 11	I
31	13. 43. 23	E

IV. Satellite.

Days	h ′ ″	
11	23. 12. 51	I
12	2. 4. 47	E
28	17. 12. 43	I
28	19. 56. 45	E

JULY 1767.

MERCURY. greateſt Elong. 29d

Days.	Heliocentric Longitude. s ° ′	Heliocentric Latitude. ° ′	Geocentric Longitude. s ° ′	Geocentric Latitude. ° ′	Declination. ° ′	Paſſage over Merid. h ′
1	4. 29. 30	6. 47 N	3. 21. 31	1. 53 N	23. 36 N	0. 54
7	5. 25. 59	5. 21	4. 2. 42	1. 43	21. 16	1. 16
13	6. 18. 4	3. 15	4. 12. 42	1. 13	18. 11	1. 32
19	7. 7. 14	1. 2	4. 21. 31	0. 27	14. 47	1. 42
25	7. 24 39	1. 5 S	4. 29. 3	0. 32 S	11. 19	1. 46

VENUS.

Days.	Heliocentric Longitude. s ° ′	Heliocentric Latitude. ° ′	Geocentric Longitude. s ° ′	Geocentric Latitude. ° ′	Declination. ° ′	Paſſage over Merid. h ′
1	6. 26. 38	2. 31 N	4. 19. 57	1. 43 N	16. 28 N	2. 51
7	7. 6. 15	2. 6	4. 26. 45	1. 30	14. 1	2. 53
13	7. 15. 50	1. 38	5. 3. 28	1. 13	11. 23	2. 54
19	7. 25. 25	1. 7	5. 10. 5	0. 53	8. 37	2. 54
25	8. 4. 58	0. 34	5. 16. 36	0. 28	5. 44	2. 54

MARS.

Days.	Heliocentric Longitude. s ° ′	Heliocentric Latitude. ° ′	Geocentric Longitude. s ° ′	Geocentric Latitude. ° ′	Declination. ° ′	Paſſage over Merid. h ′
1	4. 14. 41	1. 51 N	4. 1. 21	1. 12 N	21. 3 N	1. 35
7	4. 17. 20	1. 51	4. 5. 9	1. 11	20. 9	1. 26
13	4. 19. 58	1. 51	4. 8. 56	1. 11	19. 11	1. 17
19	4. 22. 36	1. 51	4. 12. 44	1. 10	18. 8	1. 8
25	4. 25. 13	1. 50	4. 16. 32	1. 10	17. 1	1. 0

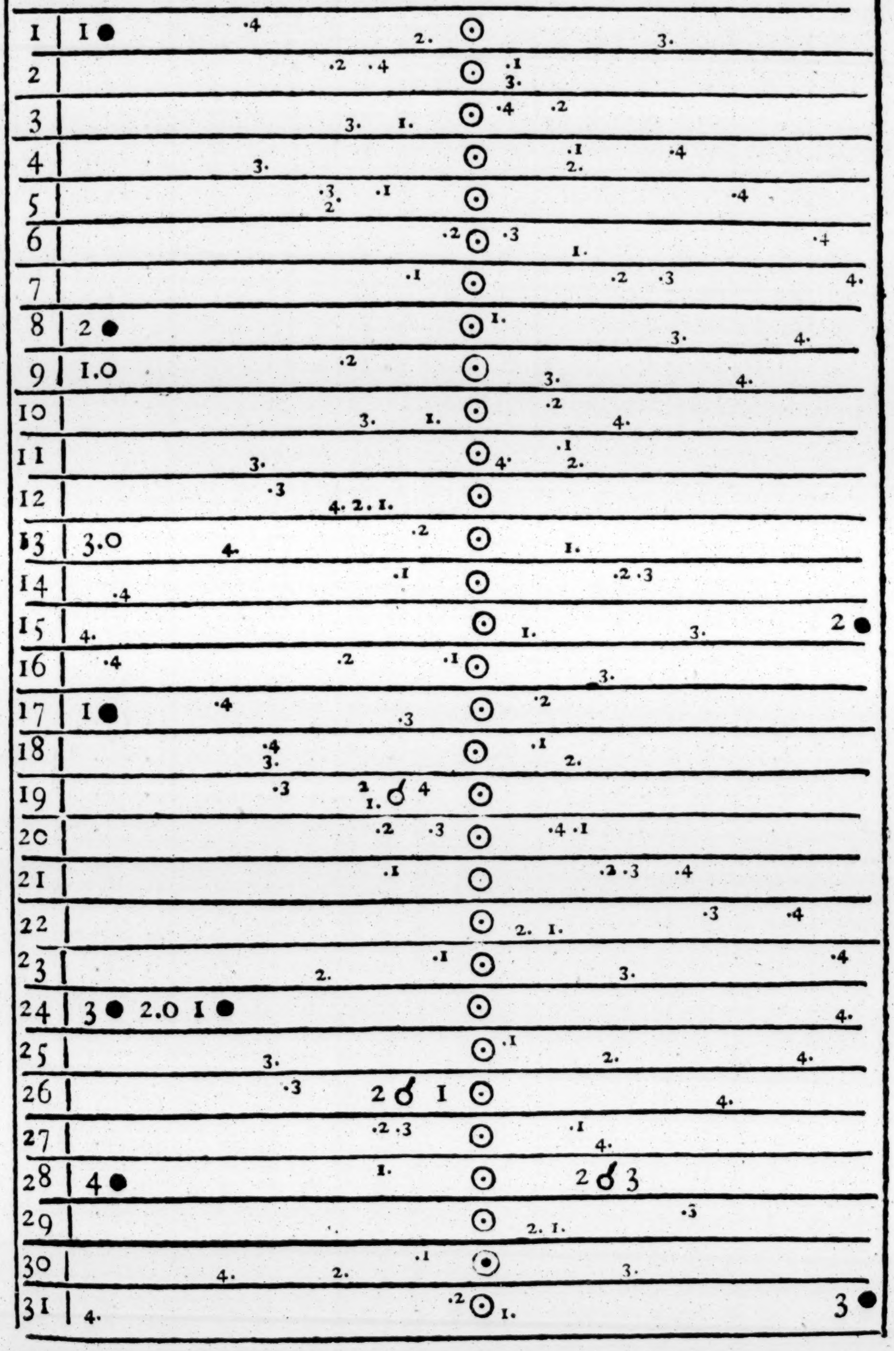
JUPITER.

Days.	Heliocentric Longitude. s ° ′	Heliocentric Latitude. ° ′	Geocentric Longitude. s ° ′	Geocentric Latitude. ° ′	Declination. ° ′	Paſſage over Merid. h ′
1	5. 26. 48	1. 18 N	5. 16. 51	1. 13 N	6. 19 N	4. 32
7	5. 27. 15	1. 18	5. 17. 42	1. 12	5. 58	4. 11
13	5. 27. 42	1. 18	5. 18. 36	1. 12	5. 38	3. 50
19	5. 28. 9	1. 18	5. 19. 34	1. 11	5. 12	3. 29
25	5. 28. 37	1. 18	5. 20. 36	1. 10	4. 50	3. 9

SATURN.

Days.	Heliocentric Longitude. s ° ′	Heliocentric Latitude. ° ′	Geocentric Longitude. s ° ′	Geocentric Latitude. ° ′	Declination. ° ′	Paſſage over Merid. h ′
1	2. 23. 47	1. 10 S	2. 25. 21	1. 3 S	22. 20 N	22. 56
7	2. 24. 1	1. 9	2. 26. 7	1. 3	22. 22	22. 35
13	2. 24. 14	1. 9	2. 26. 52	1. 2	22. 24	22. 14
19	2. 24. 28	1. 8	2. 27. 35	1. 2	22. 25	21. 53
25	2. 24. 42	1. 8	2. 28. 18	1. 2	22. 26	21. 32

Configurations of the SATELLITES of JUPITER at 9 o' th' Clock in the Evening.



JULY 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	W.	5. 8. 36. 40	5. 14. 31. 45	3. 13. 6 S	3. 38. 1 S
2	Th.	5. 20. 26. 48	5. 26. 22. 18	4. 0. 23	4. 20. 15
3	F.	6. 2. 18. 54	6. 8. 17. 12	4. 37. 26	4. 51. 39
4	Sa.	6. 14. 17. 48	6. 20. 21. 17	5. 2. 46	5. 10. 39
5	Su.	6. 26. 28. 12	7. 2. 39. 5	5. 15. 9	5. 15. 55
6	M.	7. 8. 54. 22	7. 15. 14. 37	5. 13. 2	5. 6. 19
7	Tu.	7. 21. 40. 14	7. 28. 11. 26	4. 55. 43	4. 41. 9
8	W.	8. 4. 48. 23	8. 11. 31. 11	4. 22. 35	4. 0. 13
9	Th.	8. 18. 19. 51	8. 25. 14. 13	3. 34. 9	3. 4. 34
10	F.	9. 2. 14. 2	9. 9. 18. 52	2. 31. 52	1. 56. 23
11	Sa.	9. 16. 28. 16	9. 23. 41. 36	1. 18. 44 S	0. 39. 23 S
12	Su.	10. 0. 58. 2	10. 8. 16. 55	0. 0. 51 N	0. 41. 17 N
13	M.	10. 15. 37. 24	10. 22. 58. 32	1. 21. 13	1. 59. 51
14	Tu.	11. 0. 19. 40	11. 7. 39. 59	2. 36. 29	3. 10. 30
15	W.	11. 14. 58. 52	11. 22. 15. 35	3. 41. 15	4. 8. 15
16	Th.	11. 29. 29. 34	0. 6. 40. 25	4. 31. 10	4. 49. 36
17	F.	0. 13. 47. 48	0. 20. 51. 27	5. 3. 26	5. 12. 32
18	Sa.	0. 27. 51. 11	1. 4. 46. 49	5. 16. 53	5. 16. 33
19	Su.	1. 11. 38. 19	1. 18. 25. 40	5. 11. 45	5. 2. 32
20	M.	1. 25. 8. 57	2. 1. 48. 12	4. 49. 16	4. 32. 22
21	Tu.	2. 8. 23. 27	2. 14. 54. 49	4. 11. 53	3. 48. 9
22	W.	2. 21. 22. 27	2. 27. 46. 31	3. 21. 53	2. 53. 25
23	Th.	3. 4. 7. 9	3. 10. 24. 31	2. 23. 6	1. 51. 9
24	F.	3. 16. 38. 46	3. 22. 50. 6	1. 18. 9	0. 44. 26 N
25	Sa.	3. 28. 58. 44	4. 5. 4. 44	0. 10. 30 N	0. 23. 22 S
26	Su.	4. 11. 8. 21	4. 17. 9. 48	0. 56. 42 S	1. 29. 14
27	M.	4. 23. 9. 27	4. 29. 7. 27	2. 0. 38	2. 30. 31
28	Tu.	5. 5. 4. 7	5. 10. 59. 46	2. 58. 41	3. 24. 49
29	W.	5. 16. 54. 45	5. 22. 49. 25	3. 48. 41	4. 10. 5
30	Th.	5. 28. 44. 17	6. 4. 39. 42	4. 28. 52	4. 44. 46
31	F.	6. 10. 36. 11	6. 16. 34. 11	4. 57. 35	5. 7. 24

JULY 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			h ′	° ′	° ′	° ′	° ′
1	W.	7	4. 2	159. 2	164. 21	5. 22 N	2. 45 N
2	Th.	8	4. 42	169. 39	174. 57	0. 6 S	2. 32 S
3	F.	9	5. 22	180. 17	185. 41	5. 10	7. 45
4	Sa.	10	6. 3	191. 10	196. 48	10. 17	12. 45
5	Su.	11	6. 46	202. 35	208. 33	15. 7	17. 21
6	M.	12	7. 34	214. 45	221. 10	19. 25	21. 18
7	Tu.	13	8. 25	227. 51	234. 47	22. 56	24. 21
8	W.	14	9. 20	241. 58	249. 23	25. 25	26. 10
9	Th.	15	10. 19	256. 58	264. 41	26. 31	26. 27
10	F.	16	11. 19	272. 29	280. 17	25. 59	25. 5
11	Sa.	17	12. 19	288. 2	295. 41	23. 45	22. 2
12	Su.	18	13. 16	303. 12	310. 32	19. 57	17. 33
13	M.	19	14. 10	317. 41	324. 39	14. 52	11. 57
14	Tu.	20	15. 3	331. 29	338. 10	8. 55	5. 45 S
15	W.	21	15. 53	344. 44	351. 15	2. 31 S	0. 44 N
16	Th.	22	16. 43	357. 44	4. 12	3. 57 N	7. 5
17	F.	23	17. 33	10. 42	17. 16	10. 6	12. 58
18	Sa.	24	18. 25	23. 54	30. 38	15. 39	18. 6
19	Su.	25	19. 18	37. 29	44. 27	20. 17	22. 10
20	M.	26	20. 13	51. 32	58. 41	23. 45	24. 59
21	Tu.	27	21. 9	65. 54	73. 9	25. 52	26. 24
22	W.	28	22. 3	80. 22	87. 31	26. 33	26. 20
23	Th.	29	22. 55	94. 34	101. 29	25. 47	24. 54
24	F.	30	23. 45	108. 14	114. 48	23. 43	22. 16
25	Sa.	1	☌	121. 10	127. 20	20. 34	18. 39
26	Su.	2	0. 31	133. 20	139. 9	16. 32	14. 18
27	M.	3	1. 13	144. 50	150. 22	11. 55	9. 27
28	Tu.	4	1. 56	155. 48	161. 10	6. 54	4. 18 N
29	W.	5	2. 37	166. 29	171. 46	1. 40 N	0. 59 S
30	Th.	6	3. 16	177. 3	182. 23	3. 36 S	6. 13
31	F.	7	3. 57	187. 46	193. 15	8. 46	11. 15

JULY 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	W.	14. 49	14. 48	54. 21	54. 19	0430	0432
2	Th.	14. 48	14. 49	54. 20	54. 24	0431	0426
3	F.	14. 51	14. 53	54. 29	54. 38	0419	0407
4	Sa.	14. 56	15. 0	54. 49	55. 2	0392	0375
5	Su.	15. 4	15. 9	55. 18	55. 37	0354	0329
6	M.	15. 15	15. 21	55. 57	56. 19	0304	0275
7	Tu.	15. 27	15. 34	56. 43	57. 8	0244	0213
8	W.	15. 41	15. 48	57. 33	57. 59	0181	0148
9	Th.	15. 55	16. 1	58. 24	58. 48	0117	0088
10	F.	16. 8	16. 13	59. 11	59. 32	0060	0034
11	Sa.	16. 18	16. 22	59. 50	60. 5	0012	9994
12	Su.	16. 25	16. 28	60. 17	60. 25	9980	9970
13	M.	16. 29	16. 29	60. 30	60. 31	9964	9963
14	Tu.	16. 29	16. 27	60. 29	60. 23	9965	9972
15	W.	16. 25	16. 22	60. 15	60. 4	9982	9995
16	Th.	16. 18	16. 14	59. 51	59. 36	0011	0029
17	F.	16. 10	16. 6	59. 20	59. 3	0049	0069
18	Sa.	16. 0	15. 56	58. 46	58. 27	0090	0114
19	Su.	15. 51	15. 46	58. 10	57. 52	0135	0157
20	M.	15. 41	15. 37	57. 35	57. 18	0179	0200
21	Tu.	15. 32	15. 28	57. 1	56. 45	0221	0242
22	W.	15. 23	15. 19	56. 28	56. 13	0264	0283
23	Th.	15. 15	15. 11	55. 59	55. 44	0301	0320
24	F.	15. 8	15. 4	55. 32	55. 19	0336	0353
25	Sa.	15. 1	14. 58	55. 7	54. 55	0369	0384
26	Su.	14. 56	14. 53	54. 45	54. 36	0396	0410
27	M.	14. 50	14. 49	54. 28	54. 21	0420	0430
28	Tu.	14. 47	14. 46	54. 16	54. 12	0436	0442
29	W.	14. 46	14. 46	54. 10	54. 11	0444	0443
30	Th.	14. 46	14. 47	54. 13	54. 17	0440	0435
31	F.	14. 49	14. 52	54. 23	54. 32	0427	0415

JULY 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Spica ♍	41. 57. 50	40. 29. 14	39. 0. 42	37. 32. 14
2		30. 10. 43	28. 42. 31	27. 14. 21	25. 46. 14
3		18. 26. 24	16. 58. 43	15. 31. 12	14. 3. 53
4	Antares.	52. 2. 13	50. 31. 58	49. 1. 31	47. 30. 54
5		39. 54. 40	38. 22. 45	36. 50. 32	35. 18. 5
6	α Aquilæ.	83. 33. 15	82. 11. 23	80. 49. 18	79. 27. 3
7		72. 33. 33	71. 10. 32	69. 47. 27	68. 24. 19
8	β Capricorni.	56. 39. 50	55. 0. 19	53. 20. 25	51. 40. 9
9		43. 13. 21	41. 30. 54	39. 48. 8	38. 5. 5
10	α Pegaſi.	79. 34. 45	77. 52. 39	76. 10. 19	74. 27. 45
11		65. 51. 48	64. 8. 7	62. 24. 23	60. 40. 34
12		52. 1. 46	50. 18. 21	48. 35. 9	46. 52. 12
13		38. 24. 9	36. 44. 29	35. 5. 45	33. 28. 4
14	α Arietis.	64. 2. 15	62. 12. 17	60. 22. 27	58. 32. 44
15		49. 26. 20	47. 37. 35	45. 49. 2	44. 0. 42
16	Aldebaran.	67. 42. 9	65. 56. 11	64. 10. 31	62. 25. 9
17		53. 42. 56	51. 59. 30	50. 16. 22	48. 33. 36
16	The Sun.	114. 0. 49	112. 20. 10	110. 39. 43	108. 59. 30
17		100. 42. 5	99. 3. 21	97. 24. 50	95. 46. 35
18		87. 39. 7	86. 2. 23	84. 25. 53	82. 49. 40
19		74. 52. 26	73. 17. 44	71. 43. 17	70. 9. 5
20		62. 21. 40	60. 48. 55	59. 16. 23	57. 44. 2
21		50. 5. 46	48. 34. 48	47. 4. 4	45. 33. 32
27	Spica ♍	57. 24. 25	55. 54. 43	54. 25. 7	52. 55. 39
28		45. 29. 56	44. 1. 5	42. 32. 18	41. 3. 36
29		33. 41. 26	32. 13. 14	30. 45. 6	29. 17. 3
30		21. 57. 49	20. 30. 13	19. 2. 46	17. 35. 29
31	Antares.	55. 43. 1	54. 14. 3	52. 44. 56	51. 15. 43

JULY 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Spica ♍	36. 3. 49	34. 35. 29	33. 7. 11	31. 38. 56
2		24. 18. 8	22. 50. 4	21. 22. 5	19. 54. 11
3	Antares.	58. 1. 35	56. 32. 0	55. 2. 14	53. 32. 19
4		46. 0. 4	44. 29. 4	42. 57. 49	41. 26. 22
5		33. 45. 20	32. 12. 18	30. 38. 59	29. 5. 25
6	α Aquilæ	78. 4. 37	76. 42. 2	75. 19. 19	73. 56. 30
7		67. 1. 9	65. 38. 0	64. 14. 56	62. 51. 58
8	β Capricorni.	49. 59. 30	48. 18. 29	46. 37. 7	44. 55. 25
9		36. 21. 43	34. 38. 3	32. 54. 12	31. 10. 11
10	α Pegaſi.	72. 44. 57	71. 1. 55	69. 18. 42	67. 35. 20
11		58. 56. 41	57. 12. 49	55. 29. 1	53. 45. 21
12		45. 9. 36	43. 27. 26	41. 45. 45	40. 4. 37
13		31. 51. 40	30. 16. 44	28. 43. 32	27. 12. 20
14	α Arietis.	56. 43. 8	54. 53. 41	53. 4. 24	51. 15. 17
15		42. 12. 34	40. 24. 41	38. 37. 2	36. 49. 38
16	Aldebaran.	60. 40. 5	58. 55. 18	57. 10. 50	55. 26. 42
17		46. 51. 15	45. 9. 20	43. 27. 50	41. 46. 47
15	The Sun.	120. 45. 32	119. 4. 3	117. 22. 47	115. 41. 42
16		107. 19. 29	105. 39. 46	104. 0. 17	102. 21. 4
17		94. 8. 35	92. 30. 49	90. 53. 19	89. 16. 5
18		81. 13. 41	79. 37. 59	78. 2. 33	76. 27. 22
19		68. 35. 8	67. 1. 25	65. 27. 56	63. 54. 41
20		56. 11. 53	54. 40. 1	53. 8. 22	51. 36. 57
21		44. 3. 13	42. 33. 7	41. 3. 13	
27	Spica ♍	51. 26. 17	49. 57. 3	48. 27. 55	46. 58. 53
28		39. 35. 1	38. 6. 30	36. 38. 4	35. 9. 43
29		27. 49. 4	26. 21. 7	24. 53. 15	23. 25. 30
30		16. 8. 26	14. 41. 42	13. 15. 23	11. 49. 26
31	Antares.	49. 46. 20	48. 16. 50	46. 47. 13	45. 17. 26

JULY 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	59. 22. 49	60. 44. 32	62. 6. 12	63. 27. 49
2		70. 15. 32	71. 37. 6	72. 58. 41	74. 20. 19
3		81. 9. 9	82. 31. 11	83. 53. 19	85. 15. 34
4		92. 8. 36	93. 31. 42	94. 54. 59	96. 18. 28
5		103. 18. 56	104. 43. 44	106. 8. 47	107. 34. 6
6		114. 44. 42	116. 11. 44	117. 39. 7	119. 6. 50
4	Regulus.	47. 57. 17	49. 27. 22	50. 57. 38	52. 28. 5
5		60. 3. 36	61. 35. 24	63. 7. 28	64. 39. 47
6	Spica ♍	18. 32. 12	20. 5. 11	21. 38. 37	23. 12. 27
7		31. 8. 22	32. 44. 48	34. 21. 40	35. 58. 55
8		44. 11. 15	45. 50. 57	47. 31. 4	49. 11. 35
9		57. 40. 13	59. 23. 7	61. 6. 25	62. 50. 4
10	Antares.	25. 44. 3	27. 30. 7	29. 16. 28	31. 3. 6
11		40. 0. 53	41. 49. 17	43. 37. 56	45. 26. 49
12		54. 34. 12	56. 24. 12	58. 14. 19	60. 4. 33
13	β Capricorni.	15. 8. 41	16. 54. 40	18. 41. 25	20. 28. 49
14		29. 31. 26	31. 20. 26	33. 9. 29	34. 58. 34
15	α Aquilæ	50. 53. 43	52. 19. 5	53. 45. 18	55. 12. 17
16		62. 36. 7	64. 6. 13	65. 36. 37	67. 7. 16
17	α Pegaſi.	27. 3. 0	28. 30. 19	29. 59. 4	31. 29. 6
18		39. 13. 8	40. 47. 46	42. 22. 46	43. 58. 5
19		51. 57. 1	53. 33. 3	55. 9. 6	56. 45. 8
20		64. 44. 20	66. 19. 56	67. 55. 25	69. 30. 47
21	α Arietis.	34. 10. 47	35. 47. 57	37. 24. 56	39. 1. 46
22		47. 3. 27	48. 39. 18	50. 14. 59	51. 50. 30
23	Aldebaran	28. 38. 30	30. 7. 44	31. 37. 11	33. 6. 50
29	The Sun.	41. 2. 55	42. 24. 26	43. 45. 56	45. 7. 23
30		51. 54. 31	53. 15. 59	54. 37. 28	55. 59. 0
31		62. 47. 23	64. 9. 14	65. 31. 10	66. 53. 13

JULY 1767.

Diſtances of ☽'s Center from ⊙, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	64. 49. 24	66. 10. 56	67. 32. 28	68. 54. 0
2		75. 41. 59	77. 3. 40	78. 25. 25	79. 47. 15
3		86. 37. 55	88. 0. 22	89. 22. 58	90. 45. 42
4		97. 42. 9	99. 6. 1	100. 30. 6	101. 54. 24
5		108. 59. 40	110. 25. 29	111. 51. 35	113. 18. 0
6		120. 34. 55			
4	Regulus.	53. 58. 45	55. 29. 38	57. 0. 45	58. 32. 4
5		66. 12. 23	67. 45. 15	69. 18. 24	70. 51. 51
6	Spica ♍	24. 46. 44	26. 21. 29	27. 56. 42	29. 32. 18
7		37. 36. 36	39. 14. 38	40. 53. 6	42. 31. 57
8		50. 52. 32	52. 33. 52	54. 15. 35	55. 57. 42
9		64. 34. 7	66. 18. 32	68. 3. 17	69. 48. 25
10	Antares.	32. 50. 2	34. 37. 19	36. 24. 53	38. 12. 45
11		47. 15. 56	49. 5. 14	50. 54. 43	52. 44. 22
12		61. 54. 55	63. 45. 23	65. 35. 54	67. 26. 30
13	β Capricorni.	22. 16. 45	24. 5. 3	25. 53. 40	27. 42. 29
14		36. 47. 40	38. 36. 46	40. 25. 50	42. 14. 51
15	α Aquilæ.	56. 39. 57	58. 8. 12	59. 37. 4	61. 6. 23
16		68. 38. 8	70. 9. 8	71. 40. 15	73. 11. 27
17	α Pegaſi.	33. 0. 14	34. 32. 20	36. 5. 17	37. 38. 55
18		45. 33. 38	47. 9. 19	48. 45. 8	50. 21. 2
19		58. 21. 8	59. 57. 3	61. 32. 53	63. 8. 39
20		71. 6. 2	72. 41. 8	74. 16. 4	75. 50. 50
21	α Arietis.	40. 38. 26	42. 14. 56	43. 51. 16	45. 27. 26
22		53. 25. 51	55. 1. 2	56. 36. 1	58. 10. 49
23	Aldebaran	34. 36. 41	36. 6. 43	37. 36. 52	39. 7. 3
29	The Sun.	46. 28. 48	47. 50. 12	49. 11. 36	50. 33. 3
30		57. 20. 35	58. 42. 12	60. 3. 52	61. 25. 36
31		68. 15. 23	69. 37. 43	71. 0. 12	72. 22. 49

AUGUST 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Sa.	Lammas Day.
2	*Su.*	*7th Sunday after Trinity.*
3	M.	
4	Tu.	
5	W.	
6	Th.	Transfigur. of our Lord.
7	F.	Name of Jesus.
8	Sa.	
9	*Su.*	*8th Sunday after Trinity.*
10	M.	St. Lawrence.
11	Tu.	Prs. of Brunswick born.
12	W.	Pr. of Wales born 1762.
13	Th.	
14	F.	
15	Sa.	
16	*Su.*	*9th Sun. after Trin.* Pr. [Fred. born.
17	M.	
18	Tu.	
19	W.	
20	Th.	
21	F.	Pr. William Hen. born.
22	Sa.	
23	*Su.*	*10th Sunday after Trinity.*
24	M.	St. Bartholomew.
25	Tu.	
26	W.	
27	Th.	
28	F.	St. Augustine.
29	Sa.	Beheading of St. John Bt.
30	*Su.*	*11th Sunday after Trinity.*
31	M.	

Phases of the Moon.

	D.	H.	′
First Quarter —	2.	10.	49
Full Moon ——	9.	12.	11
Last Quarter —	16.	2.	33
New Moon ——	23.	22.	6

Other Phenomena.

D.

3. ☾ π ♏ 23^h. 47′.

4. ☾ σ ♏ 8^h. 47′.

☾ α ♏ 12^h. 23′

6. ☾ λ ♐ 11^h. 34′.

9. ♂ α ♌ diff. Lat. 40′.

10. ☾ θ ♒ 8^h. 5′.

11. ♄ η ♊ diff. Lat. 7′

♃ β ♍ diff. Lat. 26′.

13. ☾ η ♓ 23^h. 20′.

16. ☾ η Pleiadum 8^h. 32.

19. ☾ ζ ♊ 10^h. 45′

21. ☾ δ ♋ 19^h. 1′.

22. ☉ enters ♍ at 23^h. 26′.

25. ☾ υ ♌ 16^h. 15′.

28. ♀ α ♍ diff. Lat. 51′.

29. ♀ ι ♍ diff. Lat. 17′.

31. ☾ π ♏ 7^h 33′.

☾ σ ♏ 16^h. 47′.

☾ α ♏ 20^h. 28′.

AUGUST 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declination North.	Equat. of Time Add.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Sa.	4. 8. 52. 54	8. 45. 16	18. 3. 43	5. 53	
2	Su.	4. 9. 50. 21	8. 49. 8	17. 48. 27	5. 50	3
3	M.	4. 10. 47. 50	8. 53. 1	17. 32. 55	5. 45	5
4	Tu.	4. 11. 45. 19	8. 56. 53	17. 17. 5	5. 40	5
5	W.	4. 12. 42. 49	9. 0. 44	17. 0. 58	5. 35	5
6	Th.	4. 13. 40. 20	9. 4. 34	16. 44. 35	5. 28	7
7	F.	4. 14. 37. 52	9. 8. 24	16. 27. 56	5. 22	6
8	Sa.	4. 15. 35. 24	9. 12. 14	16. 11. 1	5. 14	8
9	Su.	4. 16. 32. 57	9. 16. 3	15. 53. 50	5. 7	7
10	M.	4. 17. 30. 32	9. 19. 52	15. 36. 24	4. 58	9
11	Tu.	4. 18. 28. 8	9. 23. 39	15. 18. 43	4. 49	9
12	W.	4. 19. 25. 45	9. 27. 26	15. 0. 47	4. 40	9
13	Th.	4. 20. 23. 24	9. 31. 11	14. 42. 37	4. 30	10
14	F.	4. 21. 21. 4	9. 34. 57	14. 24. 13	4. 19	11
15	Sa.	4. 22. 18. 47	9. 38. 42	14. 5. 34	4. 8	11
16	Su.	4. 23. 16. 30	9. 42. 27	13. 46. 42	3. 57	11
17	M.	4. 24. 14. 15	9. 46. 12	13. 27. 37	3. 45	12
18	Tu.	4. 25. 12. 2	9. 49. 56	13. 8. 18	3. 32	13
19	W.	4. 26. 9. 51	9. 53. 40	12. 48. 47	3. 19	13
20	Th.	4. 27. 7. 41	9. 57. 22	12. 29. 4	3. 5	14
21	F.	4. 28. 5. 34	10. 1. 5	12. 9. 9	2. 51	14
22	Sa.	4. 29. 3. 28	10. 4. 47	11. 49. 2	2. 36	15
23	Su.	5. 0. 1. 23	10. 8. 28	11. 28. 43	2. 21	15
24	M.	5. 0. 59. 21	10. 12. 9	11. 8. 14	2. 5	16
25	Tu.	5. 1. 57. 20	10. 15. 50	10. 47. 34	1. 50	15
26	W.	5. 2. 55. 20	10. 19. 30	10. 26. 44	1. 33	17
27	Th.	5. 3. 53. 22	10. 23. 10	10. 5. 43	1. 17	16
28	F.	5. 4. 51. 25	10. 26. 49	9. 44. 34	1. 0	17
29	Sa.	5. 5. 49. 29	10. 30. 28	9. 23. 14	0. 42	18
30	Su.	5. 6. 47. 35	10. 34. 7	9. 1. 47	0. 25	17
31	M.	5. 7. 45. 43	10. 37. 46	8. 40. 10	0. 7	18

AUGUST 1767.

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	15. 49, 0	1. 6, 5	2. 23, 6	0. 006253	10. 0. 14
7	15. 50, 0	1. 6, 0	2. 23, 9	0. 005831	9. 29. 55
13	15. 51, 0	1. 5, 5	2. 24, 3	0. 005367	9. 29. 36
19	15. 52, 1	1. 5, 1	2. 24, 6	0. 004874	9. 29. 17
25	15. 53, 3	1. 4, 6	2. 25, 0	0. 004311	9. 28. 58

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Emerſions.

Days	h ′ ″
2	8*17. 52
4	2. 46. 34
5	21. 15. 18
7	15. 43. 59
9	10. 12. 49
11	4. 41. 39
12	23. 10. 25
14	17. 39. 15
16	12. 8. 7

II. Satellite. Emerſions.

Days	h ′ ″
2	8. 31. 49
5	21. 50. 41
9	11. 9. 40
13	0. 28. 44
16	13. 47. 52

III. Satellite.

Days	h ′ ″	
7	14. 50. 55	I
7	17. 42. 7	E
14	18. 51. 7	I
14	21. 41. 19	E

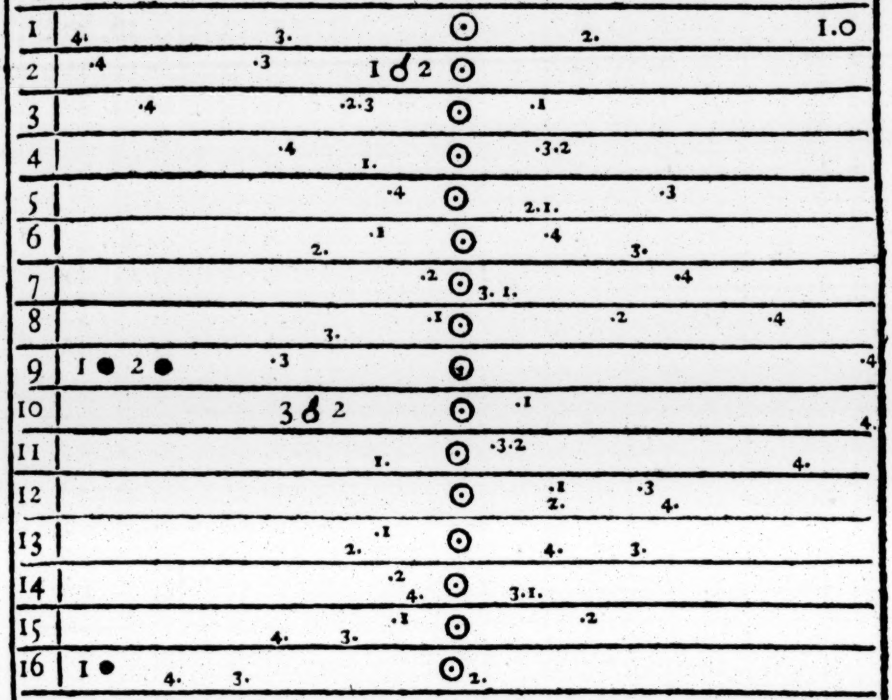
IV. Satellite.

Days	h ′ ″	
14	11. 15. 39	I
14	13. 51. 15	E

AUGUST 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
			MERCURY: inf. ☌ 25^{d} 22^{h} 10′			
1	8. 14. 0	3. 19 S	5. 5. 55	1. 51 S	7. 37 N	1. 43
7	9. 0. 37	4. 57	5. 9. 42	3. 1	5. 8	1. 32
13	9. 18. 4	6. 12	5. 10. 48	4. 3	3. 47	1. 12
19	10. 7. 12	6. 56	5. 8. 39	4. 36	4. 2	0. 41
25	10. 29. 8	6. 48	5. 3. 43	4. 15	6. 12	0. 0
			VENUS. greateſt Elong. 17^{d}			
1	8. 16. 5	0. 5 S	5. 24. 2	0. 5 S	2. 16 N	2. 53
7	8. 25. 35	0. 39	6. 0. 16	0. 37	0. 40 S	2. 52
13	9. 5. 5	1. 11	6. 6. 18	1. 12	3. 37	2. 50
19	9. 14. 34	1. 42	6. 12. 7	1. 50	6. 29	2. 48
25	9. 24. 3	2. 9	6. 17. 41	2. 31	9. 17	2. 46
			MARS.			
1	4. 28. 17	1. 49 N	4. 20. 57	1. 9 N	15. 36 N	0. 50
7	5. 0. 55	1. 48	4. 24. 46	1. 8	14. 21	0. 41
13	5. 3. 32	1. 47	4. 28. 34	1. 7	13. 2	0. 33
19	5. 6. 9	1. 46	5. 2. 23	1. 6	11. 40	0. 26
25	5. 8. 47	1. 44	5. 6. 12	1. 5	10. 15	0. 18
			JUPITER.			
1	5. 29. 8	1. 18 N	5. 21. 51	1. 8 N	4. 18 N	2. 47
7	5. 29. 36	1. 18	5. 22. 58	1. 8	3. 51	2. 28
13	6. 0. 3	1. 18	5. 24. 7	1. 8	3. 22	2. 10
19	6. 0. 30	1. 18	5. 25. 19	1. 7	2. 53	1. 51
25	6. 0. 58	1. 18	5. 26. 32	1. 7	2. 24	1. 33
			SATURN.			
1	2. 24. 57	1. 7 S	2. 29. 6	1. 2 S	22. 26 N	21. 8
7	2. 25. 11	1. 6	2. 29. 44	1. 2	22. 26	20. 47
13	2. 25. 24	1. 6	3. 0. 20	1. 2	22. 26	20. 27
19	2. 25. 38	1. 5	3. 0. 55	1. 2	22. 26	20. 7
25	2. 25. 51	1. 5	3. 1. 28	1. 2	22. 26	19. 47

Configurations of the Satellites of JUPITER at 9 o' th' Clock in the Evening.



The Satellites of JUPITER cannot be obſerved from this Time until NOVEMBER, becauſe of his Nearneſs to the SUN.

AUGUST 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	Sa.	6. 22. 34. 19	6. 28. 37. 0	5. 13. 51 S	5. 16. 53 S
2	Su.	7. 4. 42. 55	7. 10. 52. 32	5. 16. 23	5. 12. 16
3	M.	7. 17. 6. 22	7. 23. 25. 1	5. 4. 26	4. 52. 52
4	Tu.	7. 29. 48. 50	8. 6. 18. 24	4. 37. 28	4. 18. 22
5	W.	8. 12. 53. 57	8. 19. 35. 56	3. 55. 37	3. 29. 13
6	Th.	8. 26. 24. 30	9. 3. 19. 43	2. 59. 31	2. 26. 38
7	F.	9. 10. 21. 28	9. 17. 29. 28	1. 51. 8	1. 13. 21 S
8	Sa.	9. 24. 43. 30	10. 2. 3. 2	0. 33. 55 S	0. 6. 37 N
9	Su.	10. 9. 27. 12	10. 16. 55. 5	0. 47. 21 N	1. 27. 42
10	M.	10. 24. 25. 46	11. 1. 58. 8	2. 6. 42	2. 43. 39
11	Tu.	11. 9. 30. 54	11. 17. 3. 2	3. 17. 43	3. 48. 15
12	W.	11. 24. 33. 20	0. 2. 0. 50	4. 14. 42	4. 36. 38
13	Th.	0. 9. 24. 34	0. 16. 43. 46	4. 53. 52	5. 5. 57
14	F.	0. 23. 57. 52	1. 1. 6. 28	5. 13. 2	5. 15. 11
15	Sa.	1. 8. 9. 10	1. 15. 5. 55	5. 12. 37	5. 5. 26
16	Su.	1. 21. 56. 42	1. 28. 41. 47	4. 53. 53	4. 38. 24
17	M.	2. 5. 21. 6	2. 11. 55. 3	4. 19. 27	3. 57. 17
18	Tu.	2. 18. 23. 56	2. 24. 48. 13	3. 32. 22	3. 5. 5
19	W.	3. 1. 8. 7	3. 7. 24. 9	2. 35. 50	2. 5. 0
20	Th.	3. 13. 36. 34	3. 19. 45. 56	1. 32. 57	1. 0. 9 N
21	F.	3. 25. 52. 25	4. 1. 56. 34	0. 26. 51 N	0. 6. 24 S
22	Sa.	4. 7. 58. 35	4. 13. 58. 49	0. 39. 26 S	1. 11. 48
23	Su.	4. 19. 57. 28	4. 25. 54. 59	1. 43. 13	2. 13. 21
24	M.	5. 1. 51. 23	5. 7. 47. 5	2. 42. 0	3. 8. 42
25	Tu.	5. 13. 42. 13	5. 19. 37. 3	3. 33. 18	3. 55. 38
26	W.	5. 25. 31. 47	6. 1. 26. 47	4. 15. 23	4. 32. 23
27	Th.	6. 7. 22. 18	6. 13. 18. 33	4. 46. 29	4. 57. 30
28	F.	6. 19. 15. 50	6. 25. 14. 42	5. 5. 21	5. 9. 52
29	Sa.	7. 1. 15. 21	7. 7. 18. 21	5. 11. 1	5. 8. 44
30	Su.	7. 13. 24. 0	7. 19. 32. 48	5. 2. 54	4. 53. 37
31	M.	7. 25. 45. 18	8. 2. 1. 58	4. 40. 45	4. 24. 26

AUGUST 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			h ′	° ′	° ′	° ′	° ′
1	Sa.	7	4. 38	198. 52	204. 36	13. 38 S	15. 55 S
2	Su.	8	5. 23	210. 34	216. 43	18. 4	20. 3
3	M.	9	6. 12	223. 5	229. 41	21. 49	23. 22
4	Tu.	10	7. 6	236. 32	243. 37	24. 40	25. 38
5	W.	11	8. 2	250. 54	258. 23	26. 16	26. 32
6	Th.	12	9. 1	265. 59	273. 42	26. 24	25. 52
7	F.	13	10. 1	281. 25	289. 8	24. 55	23. 32
8	Sa.	14	11. 0	296. 47	304. 18	21. 46	19. 37
9	Su.	15	11. 56	311. 41	318. 55	17. 9	14. 24
10	M.	16	12. 52	326. 1	332. 59	11. 25	8. 14
11	Tu.	17	13. 44	339. 50	346. 36	4. 56 S	1. 37 S
12	W.	18	14. 36	353. 19	0. 0	1. 44 N	5. 2 N
13	Th.	19	15. 29	6. 42	13. 25	8. 15	11. 17
14	F.	20	16. 21	20. 12	27. 3	14. 9	16. 48
15	Sa.	21	17. 15	34. 0	41. 2	19. 10	21. 15
16	Su.	22	18. 11	48. 9	55. 20	23. 0	24. 25
17	M.	23	19. 7	62. 35	69. 49	25. 28	26. 10
18	Tu.	24	20. 3	77. 2	84. 12	26. 29	26. 27
19	W.	25	20. 56	91. 16	98. 12	26. 4	25. 21
20	Th.	26	21. 46	104. 58	111. 33	24. 19	23. 0
21	F.	27	22. 33	117. 57	124. 11	21. 26	19. 39
22	Sa.	28	23. 17	130. 14	136. 6	17. 39	15. 30
23	Su.	29	23. 59	141. 49	147. 24	13. 13	10. 48
24	M.	30	☌	152. 53	158. 17	8. 18	5. 44
25	Tu.	1	0. 40	163. 37	168. 55	3. 8 N	0. 30 N
26	W.	2	1. 20	174. 12	179. 31	2. 8 S	4. 44 S
27	Th.	3	2. 0	184. 52	190. 17	7. 19	9. 49
28	F.	4	2. 41	195. 48	201. 26	12. 15	14. 35
29	Sa.	5	3. 25	207. 13	213. 11	16. 47	18. 49
30	Su.	6	4. 15	219. 19	225. 39	20. 41	22. 21
31	M.	7	5. 2	232. 12	238. 58	23. 46	24. 55

AUGUST 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	Sa.	14. 54	14. 58	54. 43	54. 57	0400	0382
2	Su.	15. 3	15. 8	55. 14	55. 31	0359	0337
3	M.	15. 13	15. 20	55. 52	56. 15	0310	0280
4	Tu.	15. 26	15. 34	56. 41	57. 7	0247	0214
5	W.	15. 41	15. 49	57. 34	58. 3	0180	0143
6	Th.	15. 57	16. 4	58. 31	58. 59	0109	0074
7	F.	16. 12	16. 19	59. 26	59. 52	0041	0010
8	Sa.	16. 25	16. 30	60. 15	60. 35	9982	9958
9	Su.	16. 35	16. 38	60. 51	61. 3	9939	9925
10	M.	16. 40	16. 41	61. 10	61. 13	9916	9913
11	Tu.	16. 41	16. 39	61. 12	61. 6	9914	9921
12	W.	16. 36	16. 32	60. 56	60. 42	9933	9950
13	Th.	16. 28	16. 22	60. 25	60. 5	9970	9994
14	F.	16. 16	16. 10	59. 43	59. 20	0021	0049
15	Sa.	16. 3	15. 57	58. 57	58. 32	0077	0107
16	Su.	15. 51	15. 44	58. 9	57. 44	0136	0167
17	M.	15. 37	15. 32	57. 21	56. 59	0196	0224
18	Tu.	15. 26	15. 20	56. 38	56. 18	0251	0276
19	W.	15. 16	15. 11	56. 0	55. 43	0300	0322
20	Th.	15. 7	15. 3	55. 27	55. 13	0342	0361
21	F.	15. 0	14. 56	55. 1	54. 49	0377	0392
22	Sa.	14. 53	14. 51	54. 39	54. 30	0406	0418
23	Su.	14. 49	14. 47	54. 22	54. 16	0428	0436
24	M.	14. 46	14. 45	54. 11	54. 7	0443	0448
25	Tu.	14. 44	14. 44	54. 4	54. 3	0452	0454
26	W.	14. 44	14. 44	54. 3	54. 5	0454	0451
27	Th.	14. 45	14. 46	54. 8	54. 13	0447	0440
28	F.	14. 48	14. 51	54. 20	54. 29	0431	0419
29	Sa.	14. 54	14. 57	54. 41	54. 53	0403	0387
30	Su.	15. 1	15. 6	55. 8	55. 26	0367	0344
31	M.	15. 11	15. 17	55. 45	56. 7	0319	0291

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Antares.	43. 47. 32	42. 17. 29	40. 47. 17	39. 16. 55
2	α Aquilæ	87. 11. 41	85. 51. 51	84. 31. 52	83. 11. 44
3		76. 28. 53	75. 7. 56	73. 46. 52	72. 25. 44
4	β Capricorni.	61. 37. 36	60. 1. 22	58. 24. 46	56. 47. 48
5		48. 37. 21	46. 58. 7	45. 18. 27	43. 38. 23
6	α Pegaſi.	85. 12, 28	83. 32. 52	81. 52. 50	80. 12. 26
7		71. 44. 54	70. 2. 24	68. 19. 37	66. 36. 35
8		57. 57. 54	56. 13. 38	54. 29. 19	52. 44. 59
9		44. 4. 35	42, 21. 17	40. 38. 25	38. 56. 2
10	α Arietis.	69. 55. 50	68. 2. 58	66. 10. 4	64. 17. 9
11		54. 52. 53	53. 0, 14	51. 7. 43	49. 15. 21
12	Aldebaran.	72. 33. 6	70. 42. 48	68. 52. 50	67. 3. 10
13		57. 59. 35	56. 11. 56	54. 24. 42	52. 37. 52
14		43. 50. 39	42. 6. 45	40. 23. 28	38. 40. 48
15		30. 18. 7	28. 40. 6	27. 3. 8	25. 27. 21
14	The Sun.	117. 15. 50	115. 35. 49	113. 56. 11	112. 16. 54
15		104. 6, 2	102. 28. 58	100. 52. 15	99. 15. 54
16		91. 19. 30	89. 45. 15	88. 11. 20	86. 37. 47
17		78. 55. 4	77. 23. 29	75. 52. 13	74. 21. 16
18		66. 50. 54	65. 21. 38	63. 52. 38	62. 23. 56
19		55. 4. 12	53. 36. 57	52. 9. 56	50. 43. 8
20		43. 32. 26	42. 6. 54	40. 41. 33	39. 16. 22
26	Spica ♍	25. 7. 51	23. 40. 1	22. 12. 17	20. 44. 39
27	Antares.	58. 56. 22	57. 27. 42	55. 58. 57	54. 30. 8
28		47. 5. 15	45. 36. 2	44. 6. 44	42. 37. 19
29		35. 8. 39	33. 38. 31	32. 8. 14	30. 37. 46
30	α Aquilæ	79. 37. 9	78. 17. 49	76. 58. 26	75. 39. 0
31		69. 1. 23	67. 41. 53	66. 22. 27	65. 3. 7

AUGUST 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Antares.	37. 46. 22	36. 15. 36	34. 44. 37	33. 13. 25
2	α Aquilæ.	81. 51. 27	80. 31. 0	79. 10. 25	77. 49. 43
3		71. 4. 33	69. 43. 21	68. 22. 6	67. 0. 48
4	β Capricorni.	55. 10. 28	53. 32. 46	51. 54. 41	50. 16. 13
5		41. 57. 55	40. 17. 4	38. 35. 52	36. 54. 17
6	α Pegaſi.	78. 31. 37	76. 50. 27	75. 8. 56	73. 27. 5
7		64. 53. 16	63. 9. 43	61. 25. 58	59. 42. 1
8		51. 0. 38	49. 16. 21	47. 32. 12	45. 48. 15
9	α Arietis.	77. 26. 20	75. 33. 54	73. 41. 19	71. 48. 37
10		62. 24. 12	60. 31. 17	58. 38. 26	56. 45. 38
11		47. 23. 7	45. 31. 5	43. 39. 17	41. 47. 43
12	Aldebaran.	65. 13. 49	63. 24. 45	61. 36. 1	59. 47. 37
13		50. 51. 28	49. 5. 30	47. 20. 3	45. 35. 6
14		36. 58. 46	35. 17. 24	33. 36. 48	31. 57. 2
15		23. 52. 58	22. 20. 12	20. 49. 17	19. 20. 28
14	The Sun.	110. 38. 0	108. 59. 28	107. 21. 17	105. 43. 29
15		97. 39. 54	96. 4. 17	94. 29. 0	92. 54. 5
16		85. 4. 34	83. 31. 41	81. 59. 8	80. 26. 56
17		72. 50. 37	71. 20. 14	69. 50. 9	68. 20. 23
18		60. 55. 29	59. 27. 16	57. 59. 19	56. 31. 38
19		49. 16. 33	47. 50. 12	46. 24. 4	44. 58. 9
26	Spica ♍	19. 17. 9	17. 49. 47	16. 22. 38	14. 54. 44
27	Antares.	53. 1. 15	51. 32. 22	50. 3. 24	48. 34. 23
28		41. 7. 49	39. 38. 13	38. 8. 29	36. 38. 38
29	α Aquilæ.	84. 53. 45	83. 34. 42	82. 15. 35	80. 56. 24
30		74. 19. 31	72. 59. 59	71. 40. 27	70. 20. 55
31		63. 43. 51	62. 24. 43	61. 5. 44	59. 46. 57

AUGUST 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	73. 45. 37	75. 8. 28	76. 31. 31	77. 54. 44
2		84. 53. 52	86. 18. 21	87. 43. 5	89. 8. 4
3		96. 17. 4	97. 43. 45	99. 10. 46	100. 38. 5
4		107. 59. 51	109. 29. 18	110. 59. 9	112. 29. 24
3	Spica ♍	26. 37. 23	28. 10. 32	29. 44. 4	31. 18. 0
4		39. 13. 26	40. 49. 42	42. 26. 23	44. 3. 28
5		52. 15. 6	53. 54. 43	55. 34. 46	57. 15. 16
6	Antares.	19. 53. 59	21. 37. 18	23. 21. 3	25. 5. 16
7		33. 52. 51	35. 39. 37	37. 26. 47	39. 14. 21
8		48. 18. 6	50. 7. 58	51. 58. 9	53. 48. 40
9		63. 5. 31	64. 57. 38	66. 49. 56	68. 42. 26
10	β Capricorni.	23. 42. 23	25. 33. 46	27. 25. 18	29. 16. 59
11		38. 37. 44	40. 30. 4	42. 22. 21	44. 14. 36
12	α Aquilæ.	58. 32. 31	60. 4. 32	61. 37. 3	63. 9. 57
13		70. 58. 21	72. 32. 28	74. 6. 34	75. 40. 40
14	α Pegaſi.	35. 44. 53	27. 20. 56	38. 57. 27	40. 34. 22
15		48. 42. 7	50. 19. 54	51. 57. 40	53. 35. 21
16		61. 41. 56	63. 18. 48	64. 55. 29	66. 31. 57
17	α Arietis.	31. 11. 5	32. 48. 45	34. 26. 12	36. 3. 25
18		44. 6. 9	45. 42. 3	47. 17. 42	48. 53. 8
19	Aldebaran.	25. 51. 19	27. 18. 53	28. 46. 55	30. 15. 20
20		37. 40. 43	39. 10. 7	40. 39. 33	42. 9. 2
21		49. 36. 34	51. 5. 57	52. 35. 18	54. 4. 35
28	The Sun.	44. 38. 13	46. 0. 2	47. 21. 56	48. 43. 56
29		55. 35. 34	56. 58. 19	58. 21. 13	59. 44. 17
30		66. 42. 10	68. 6. 20	69. 30. 43	70. 55. 20
31		78. 2. 1	79. 28. 9	80. 54. 35	82. 21. 17

Diſtances of ☽'s Center from ⊙, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	79. 18. 9	80. 41. 44	82. 5. 32	83. 29. 35
2		90. 33. 18	91. 58. 48	93. 24. 36	94 50. 41
3		102. 5. 45	103. 33. 45	105. 2. 6	106. 30. 48
4		114. 0. 2	115. 31. 1	117. 2. 25	118. 34. 13
2	Spica ♍	20. 28. 32	22. 0. 10	23. 32. 11	25. 4. 35
3		32. 52. 20	34. 27. 1	36. 2. 6	37. 37. 34
4		45. 40. 59	47. 18. 53	48. 57. 13	50. 35. 57
5		58. 56. 12	60. 37. 35	62. 19. 25	64. 1. 41
6	Antares.	26. 49. 55	28. 35. 1	30. 20. 32	32. 6. 29
7		41. 2. 20	42. 50. 43	44. 39. 29	46. 28. 36
8		55. 39. 30	57. 30. 37	59. 21. 59	61. 13. 37
9		70. 35. 7	72. 27. 55	74. 20. 52	76. 13. 59
10	β Capricorni.	31. 8. 50	33. 0. 49	34. 52. 57	36. 45. 15
11	α Aquilæ.	52. 31. 12	54. 0. 17	55. 30. 17	57. 1. 4
12		64. 43. 12	66. 16. 42	67. 50. 26	69. 24. 19
13		77. 14. 46	78. 48. 45	80. 22. 34	81. 56. 15
14	α Pegaſi.	42. 11. 36	43. 49. 3	45. 26. 40	47. 4. 22
15		55. 12. 55	56. 50. 23	58. 27. 43	60. 4. 54
16		68. 8. 12	69. 44. 13	71. 20. 0	72. 55. 32
17	α Arietis.	37. 40. 25	39. 17. 11	40. 53. 44	42. 30. 3
18		50. 28. 21	52. 3. 18	53. 38. 1	55. 12. 34
19	Aldebaran.	31. 44. 4	33. 13. 1	34. 42. 8	36. 11. 23
20		43. 38. 33	45. 8. 4	46. 37. 36	48. 7. 6
21		55. 33. 50	57. 3. 1	58. 32. 8	60. 1. 11
28	The Sun.	50. 6. 1	51. 28. 13	52. 50. 32	54. 12. 59
29		61. 7. 30	62. 30. 53	63. 54. 27	65. 18. 13
30		72. 20. 10	73. 45. 15	75. 10. 34	76. 36. 10
31		83. 48. 18	85. 15. 37	86. 43. 15	88. 11. 12

SEPTEMBER 1767

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	Giles.
2	W.	Lond. burnt, 1666, O.S.
3	Th.	
4	F.	
5	Sa.	
6	*Su.*	*12th Sunday after Trinity.*
7	M.	Enurchus.
8	Tu.	Nativity of B.V.Mary.
9	W.	
10	Th.	
11	F.	
12	Sa.	
13	*Su.*	*13th Sunday after Trinity.*
14	M.	Holy Croſs.
15	Tu.	
16	W.	
17	Th.	Lambert.
18	F.	
19	Sa.	
20	*Su.*	*14th Sunday after Trinity.*
21	M.	St. Matthew.
22	Tu.	K. George III. crowned [1761.
23	W.	
24	Th.	
25	F.	
26	Sa.	St. Cyprian.
27	*Su.*	*15th Sunday after Trinity.*
28	M.	
29	Tu.	St. Michael.
30	W.	St. Jerome.

Phaſes of the Moon.

	D.	H.	′
Firſt Quarter —	1.	0.	42
Full Moon ——	7.	20.	4
Laſt Quarter —	14.	12.	48
New Moon ——	22.	14.	48
Firſt Quarter —	30.	12.	51

Other Phenomena.

D.

1. ♄ μ ♊ diff. Lat. 11′.
2. ☾ λ ♐ 21^{h}. 2′.
6. ☾ θ ♒ 19^{h}. 52′.
10. ☾ ν ♓ 8^{h}. 28′.
12. ☽ in the Pleiades; η imm. 15^{h}. 25′; em. 16^{h}. 38′; diſt. of Center at middle 5′.
13. ☿ ρ ♌ diff. Lat. 45′.
14. ☾ 3 poſt ζ ♉ 13^{h}. 21′.
15. ☾ ε ♊ 16^{h}. 37′.
18. ☾ δ ♋ 0^{h}. 56′.
21. ☾ υ ♌ 22^{h}. 25′.
22. ☉ enters ♎ at 19^{h}. 41′.
25. ☾ ♀ at 22^{h} 10′; ♀ 82′ more South.
27. ☾ π ♏ 13^{h}. 50′
☾ σ ♏ 23^{h}. 12′.
28. ☾ α ♏ 2^{h}. 56′.
30. ☾ λ ♐ 4^{h}. 38′.

SEPTEMBER 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Asc. in Time.	Sun's Declination North.	Equat. of Time Sub.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Tu.	5. 8. 43. 51	10. 41. 24	8. 18. 25	0. 12	18
2	W.	5. 9. 42. 1	10. 45. 2	7. 56. 33	0. 30	19
3	Th.	5. 10. 40. 13	10. 48. 40	7. 34. 32	0. 49	20
4	F.	5. 11. 38. 26	10. 52. 16	7. 12. 25	1. 9	20
5	Sa.	5. 12. 36. 40	10. 55. 54	6. 50. 10	1. 29	20
6	Su.	5. 13. 34. 56	10. 59. 30	6. 27. 49	1. 49	20
7	M.	5. 14. 33. 13	11. 3. 7	6. 5. 21	2. 9	20
8	Tu.	5. 15. 31. 32	11. 6. 42	5. 42. 48	2. 29	20
9	W.	5. 16. 29. 54	11. 10. 19	5. 20. 8	2. 49	21
10	Th.	5. 17. 28. 17	11. 13. 55	4. 57. 23	3. 10	20
11	F.	5. 18. 26. 42	11. 17. 31	4. 34. 33	3. 30	21
12	Sa.	5. 19. 25. 9	11. 21. 6	4. 11. 39	3. 51	21
13	Su.	5. 20. 23. 38	11. 24. 42	3. 48. 39	4. 12	21
14	M.	5. 21. 22. 10	11. 28. 18	3. 25. 35	4. 33	21
15	Tu.	5. 22. 20. 44	11. 31. 54	3. 2. 28	4. 54	21
16	W.	5. 23. 19. 20	11. 35. 28	2. 39. 17	5. 15	21
17	Th.	5. 24. 17. 58	11. 39. 4	2. 16. 2	5. 36	21
18	F.	5. 25. 16. 39	11. 42. 40	1. 52. 44	5. 57	21
19	Sa.	5. 26. 15. 22	11. 46. 16	1. 29. 25	6. 18	21
20	Su.	5. 27. 14. 7	11. 49. 51	1. 6. 3	6. 39	21
21	M.	5. 28. 12. 55	11. 53. 27	0. 42. 39	7. 0	20
22	Tu.	5. 29. 11. 44	11. 57. 2	0. 19. 13	7. 20	21
				South.		
23	W.	6. 0. 10. 36	12. 0. 39	0. 4. 13	7. 41	20
24	Th.	6. 1. 9. 29	12. 4. 15	0. 27. 40	8. 1	21
25	F.	6. 2. 8. 25	12. 7. 51	0. 51. 8	8. 22	20
26	Sa.	6. 3. 7. 22	12. 11. 28	1. 14. 36	8. 42	19
27	Su.	6. 4. 6. 22	12. 15. 5	1. 38. 3	9. 1	20
28	M.	6. 5. 5. 23	12. 18. 41	2. 1. 30	9. 21	20
29	Tu.	6. 6. 4. 25	12. 22. 18	2. 24. 55	9. 41	19
30	W.	6. 7. 3. 30	12. 25. 55	2. 48. 19	10. 0	20

SEPTEMBER 1767.

Days of the Month.	Semidia-meter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	15. 54, 8	1. 4, 3	2. 25, 3	0. 003570	9. 28. 36
7	15. 56, 4	1. 4, 1	2. 25, 7	0. 002893	9. 28. 17
13	15. 57, 9	1. 4, 0	2. 26, 2	0. 002204	9. 27. 58
19	15. 59, 4	1. 4, 0	2. 26, 7	0. 001503	9. 27. 39
25	16. 1, 1	1. 4, 1	2. 27, 2	0. 000767	9. 27. 20

The Eclipſes of JUPITER's Satellites will not be viſible this Month, JUPITER being too near the SUN.

SEPTEMBER 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
			MERCURY. greateſt Elong. 11ᵈ			
1	11. 29. 52	5. 2 S	4. 28. 16	2. 32 S	9. 43 N	23. 14
7	1. 1. 50	1. 41	4. 27. 54	0. 39	11. 36	22. 56
13	2. 8. 23	2. 41 N	5. 2. 41	0. 50 N	11. 19	22. 55
19	3. 15. 51	6. 4	5. 11. 19	1. 40	8. 52	23. 7
25	4. 19. 39	6. 58	5. 21. 46	1. 52	4. 58	23. 25
			VENUS.			
1	10. 5. 7	2. 37 S	6. 23. 46	3. 21 S	12. 21 S	2. 41
7	10. 14. 36	2. 56	6. 28. 32	4. 5	14. 47	2. 37
13	10. 24. 5	3. 11	7. 2. 45	4. 49	16. 58	2. 31
19	11. 3. 36	3. 20	7. 6. 19	5. 33	18. 52	2. 22
25	11. 13. 6	3. 23	7. 9. 3	6. 13	20. 25	2. 10
			MARS. ☌ 6ᵈ 20ʰ			
1	5. 11. 51	1. 42 N	5. 10. 40	1. 3 N	8. 33 N	0. 9
7	5. 14. 28	1. 39	5. 14. 31	1. 2	7. 3	0. 2
13	5. 17. 7	1. 37	5. 18. 21	1. 1	5. 32	23. 54
19	5. 19. 46	1. 34	5. 22. 12	0. 59	4. 0	23. 47
25	5. 22. 24	1. 32	5. 26. 5	0. 57	2. 26	23. 39
			JUPITER. ☌ 26ᵈ 6ʰ 45′			
1	6. 1. 29	1. 18 N	5. 27. 59	1. 7 N	1. 49 N	1. 13
7	6. 1. 56	1. 19	5. 29. 15	1. 7	1. 19	0. 56
13	6. 2. 24	1. 19	6. 0. 32	1. 7	0. 49	0. 39
19	6. 2. 51	1. 19	6. 1. 50	1. 7	0. 17	0. 22
25	6. 3. 18	1. 19	6. 3. 7	1. 6	0. 13 S	0. 5
			SATURN. □ 26ᵈ 8ʰ			
1	2. 26. 7	1. 4 S	3. 2. 2	1. 2 S	22. 25 N	19. 24
7	2. 26. 21	1. 4	3. 2. 28	1. 2	22. 25	19. 5
13	2. 26. 34	1. 3	3. 2. 50	1. 2	22. 24	18. 45
19	2. 26. 48	1. 3	3. 3. 10	1. 2	22. 24	18. 24
25	2. 27. 1	1. 2	3. 3. 25	1. 2	22. 23	18. 4

JUPITER's Satellites will not be viſible this Month, being too near the SUN.

SEPTEMBER 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	Tu.	8. 8. 23. 16	8. 14. 49. 49	4. 4. 37 S	3. 41. 29 S
2	W.	8. 21. 21. 59	8. 28. 0. 9	3. 15. 7	2. 45. 49
3	Th.	9. 4. 44. 33	9. 11. 35. 45	2. 13. 41	1. 39. 9
4	F.	9. 18. 34. 0	9. 25. 39. 4	1. 2. 34 S	0. 24. 28 S
5	Sa.	10. 2. 50. 50	10. 10. 9. 13	0. 14. 33 N	0. 53. 58 N
6	Su.	10. 17. 33. 28	10. 25. 3. 0	1. 32. 52	2. 10. 32
7	M.	11. 2. 36. 47	11. 10. 13. 40	2. 46. 20	3. 19. 27
8	Tu.	11. 17. 52. 22	11. 25. 31. 40	3. 49. 0	4. 14. 26
9	W.	0. 3. 9. 54	0. 10. 45. 49	4. 35. 16	4. 51. 1
10	Th.	0. 18. 18. 2	0. 25. 45. 36	5. 1. 37	5. 6. 56
11	F.	1. 3. 7. 23	1. 10. 22. 52	5. 7. 7	5. 2. 18
12	Sa.	1. 17. 31. 21	1. 24. 32. 47	4. 52. 47	4. 39. 3
13	Su.	2. 1. 26. 49	2. 8. 13. 44	4. 21. 28	4. 0. 26
14	M.	2. 14. 53. 49	2. 21. 27. 21	3. 36. 27	3. 10. 1
15	Tu.	2. 27. 54. 40	3. 4. 16. 26	2. 41. 30	2. 11. 27
16	W.	3. 10. 33. 9	3. 16. 45. 19	1. 40. 9	1. 8. 7
17	Th.	3. 22. 53. 31	3. 28. 58. 20	0. 35. 35 N	0. 2. 56 N
18	F.	4. 5. 0. 24	4. 11. 0. 10	0. 29. 25 S	1. 1. 13 S
19	Sa.	4. 16. 58. 3	4. 22. 54. 39	1. 32. 11	2. 1. 53
20	Su.	4. 28. 50. 13	5. 4. 45. 13	2. 30. 15	2. 56. 48
21	M.	5. 10. 39. 56	5. 16. 34. 38	3. 21. 25	3. 43. 51
22	Tu.	5. 22. 29. 29	5. 28. 24. 55	4. 3. 52	4. 21. 12
23	W.	6. 4. 20. 54	6. 10. 17. 46	4. 35. 45	4. 47. 16
24	Th.	6. 16. 15. 38	6. 22. 14. 38	4. 55. 42	5. 0. 53
25	F.	6. 28. 14. 59	7. 4. 16. 50	5. 2. 46	5. 1. 16
26	Sa.	7. 10. 20. 34	7. 16. 26. 24	4. 56. 22	4. 48. 4
27	Su.	7. 22. 34. 29	7. 28. 45. 19	4. 36. 23	4. 21. 23
28	M.	8. 4. 59. 4	8. 11. 16. 13	4. 3. 7	3. 41. 45
29	Tu.	8. 17. 37. 7	8. 24. 2. 15	3. 17. 28	2. 50. 23
30	W.	9. 0. 32. 8	9. 7. 6. 57	2. 20. 49	1. 48. 52

SEPTEMBER 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			h ′	° ′	° ′	° ′	° ′
1	Tu.	8	5. 56	245. 55	253. 4	25. 46 S	26. 16 S
2	W.	9	6. 53	260. 22	267. 46	26. 26	26. 13
3	Th.	10	7. 51	275. 14	282. 46	25. 36	24. 37
4	F.	11	8. 49	290. 16	297. 43	23. 13	21. 27
5	Sa.	12	9. 47	305. 5	312. 21	19. 19	16. 51
6	Su.	13	10. 42	319. 31	326. 36	14. 7	11. 8
7	M.	14	11. 36	333. 35	340. 29	7. 58	4. 40 S
8	Tu.	15	12. 29	347. 22	354. 13	1. 17 S	2. 7 N
9	W.	16	13. 23	1. 5	7. 58	5. 28 N	8. 43
10	Th.	17	14. 17	14. 55	21. 57	11. 50	14. 44
11	F.	18	15. 13	29. 4	36. 17	17. 22	19. 44
12	Sa.	19	16. 10	43. 35	50. 56	21. 46	23. 26
13	Su.	20	17. 8	58. 20	65. 46	24. 44	25. 40
14	M.	21	18. 5	73. 10	80. 28	26. 12	26. 21
15	Tu.	22	19. 0	87. 40	94. 44	26. 8	25. 36
16	W.	23	19. 52	101. 37	108. 20	24. 43	23. 33
17	Th.	24	20. 39	114. 49	121. 8	22. 6	20. 26
18	F.	25	21. 25	127. 14	133. 10	18. 34	16. 31
19	Sa.	26	22. 7	138. 57	144. 35	14. 18	11. 59
20	Su.	27	22. 48	150. 6	155. 31	9. 33	7. 2
21	M.	28	23. 28	160. 53	166. 12	4. 28 N	1. 52 N
22	Tu.	29	☌	171. 30	176. 49	0. 45 S	3. 22 S
23	W.	0	0. 8	182. 9	187. 33	5. 57	8. 29
24	Th.	1	0. 49	193. 3	198. 39	10. 57	13. 19
25	F.	2	1. 32	204. 22	210. 14	15. 35	17. 41
26	Sa.	3	2. 18	216. 17	222. 30	19. 37	21. 22
27	Su.	4	3. 6	228. 53	235. 28	22. 53	24. 9
28	M.	5	3. 59	242. 14	249. 9	25. 8	25. 49
29	Tu.	6	4. 53	256. 12	263. 22	26. 10	26. 10
30	W.	7	5. 50	270. 36	277. 51	25. 48	25. 5

SEPTEMBER 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	Tu.	15. 24	15. 31	56. 30	56. 56	0261	0228
2	W.	15. 38	15. 46	57. 23	57. 51	0194	0158
3	Th.	15. 54	16. 1	58. 20	58. 49	0122	0087
4	F.	16. 9	16. 17	59. 17	59. 45	0052	0018
5	Sa.	16. 24	16. 30	60. 11	60. 34	9987	9959
6	Su.	16. 36	16. 40	60. 55	61. 11	9934	9915
7	M.	16. 44	16. 46	61. 23	61. 31	9901	9892
8	Tu.	16. 46	16. 46	61. 33	61. 30	9889	9893
9	W.	16. 44	16. 40	61. 23	61. 11	9901	9915
10	Th.	16. 36	16. 30	60. 54	60. 34	9935	9959
11	F.	16. 24	16. 17	60. 11	59. 46	9987	0017
12	Sa.	16. 9	16. 2	59. 19	58. 51	0050	0084
13	Su.	15. 54	15. 47	58 22	57. 54	0120	0155
14	M.	15. 39	15. 32	57. 27	57. 0	0189	0222
15	Tu.	15. 25	15. 19	56. 35	56. 12	0255	0284
16	W.	15. 13	15. 8	55. 51	55. 31	0311	0337
17	Th.	15. 3	14. 59	55. 14	54. 59	0359	0379
18	F.	14. 55	14. 52	54. 46	54. 34	0396	0412
19	Sa.	14. 49	14. 47	54. 24	54. 17	0426	0435
20	Su.	14. 46	14. 45	54. 10	54. 6	0444	0450
21	M.	14. 44	14. 43	54. 3	54. 2	0454	0455
22	Tu.	14. 43	14. 44	54. 2	54. 3	0455	0454
23	W.	14. 44	14. 45	54. 5	54. 9	0451	0446
24	Th.	14. 47	14. 49	54. 14	54. 21	0439	0430
25	F.	14. 51	14. 53	54. 29	54. 38	0419	0407
26	Sa.	14. 56	15. 0	54. 49	55. 1	0392	0377
27	Su.	15. 3	15. 7	55. 15	55. 30	0358	0338
28	M.	15. 12	15. 17	55. 48	56. 7	0315	0291
29	Tu.	15. 23	15. 29	56. 27	56. 49	0265	0236
30	W.	15. 35	15. 42	57. 13	57. 37	0206	0176

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	β Capricorni.	53. 5. 19	51. 29. 45	49. 53. 51	48. 17. 37
2		40. 11. 18	38. 33. 0	36. 54. 22	35. 15. 24
3	α Pegaſi.	77. 7. 45	75. 29. 12	73. 50. 18	72. 11. 3
4		63. 49. 34	62. 8. 20	60. 26. 52	58. 45. 11
5		50. 14. 7	48. 31. 36	46. 49. 6	45. 6. 40
6	α Arietis.	76. 47. 46	74. 55. 54	73. 3. 45	71. 11. 20
7		61. 45. 52	59. 52. 14	57. 58. 28	56. 4. 37
8		46. 34. 40	44. 40. 42	42. 46. 48	40. 53. 1
9	Aldebaran.	64. 5. 38	62. 13. 34	60. 21. 51	58. 30. 29
10		49. 18. 43	47. 29. 33	45. 40. 52	43. 52. 44
11		35. 1. 15	33. 17. 6	31. 33. 48	29. 51. 27
12	Pollux.	62. 9. 49	60. 24. 51	58. 40. 18	56. 56. 15
13		48. 22. 54	46. 41. 39	45. 0. 52	43. 20. 33
14	Regulus.	71. 42. 45	70. 3. 53	68. 25. 23	66. 47. 17
12	The Sun.	121. 46. 3	120. 7. 57	118. 30. 17	116. 53. 3
13		108. 53. 25	107. 18. 46	105. 44. 32	104. 10. 42
14		96. 27. 35	94. 56. 7	93. 25. 3	91. 54. 20
15		84. 26. 26	82. 57. 53	81. 29. 39	80. 1. 43
16		72. 46. 38	71. 20. 29	69. 54. 36	68. 28. 59
17		61. 24. 33	60. 0. 21	58. 36. 22	57. 12. 34
18		50. 16. 22	48. 53. 38	47. 31. 3	46. 8. 38
25	Antares.	38. 8. 13	36. 38. 17	35. 8. 15	33. 38. 7
26	α Aquilæ	82. 10. 45	80. 51. 35	79. 32. 25	78. 13. 17
27		71. 37. 40	70. 18. 38	68. 59. 42	67. 40. 52
28	β Capricorni.	56. 26. 25	54. 52. 58	53. 19. 18	51. 45. 23
29		43. 52. 19	42. 16. 58	40. 41. 23	39. 5. 32
30	α Pegaſi.	81. 6. 52	79. 32. 3	77. 56. 56	76. 21. 33

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	β Capricorni.	46. 41. 2	45. 4. 6	43. 26. 50	41. 49. 14
2		33. 36. 7	31. 56. 32	30. 16. 38	28. 36. 25
3	α Pegaſi.	70. 31. 27	68. 51. 27	67. 11. 8	65. 30. 31
4		57. 3. 16	55. 21. 10	53. 38. 57	51. 56. 35
5		43. 24. 24	41. 42. 25	40. 0. 47	38. 19. 33
6	α Arietis.	69. 18. 39	67. 25. 44	65. 32. 38	63. 39. 21
7		54. 10. 40	52. 16. 40	50. 22. 40	48. 28. 40
8		38. 59. 23	37. 5. 56	35. 12. 43	33. 19. 45
9	Aldebaran.	56. 39. 26	54. 48. 41	52. 58. 17	51. 8. 17
10		42. 5. 10	40. 18. 11	38. 31. 51	36. 46. 11
11		28. 10. 10	26. 30. 4	24. 51. 20	23. 14. 7
12	Pollux.	55. 12. 36	53. 29. 29	51. 46. 49	50. 4. 38
13		41. 40. 43	40. 1. 24	38. 22. 32	36. 44. 7
12	The Sun.	115. 16. 15	113. 39. 54	112. 3. 59	110. 28. 29
13		102. 37. 17	101. 4. 16	99. 31. 39	97. 59. 25
14		90. 24. 1	88. 54. 6	87. 24. 32	85. 55. 18
15		78. 34. 7	77. 6. 48	75. 39. 48	74. 13. 4
16		67. 3. 37	65. 38. 30	64. 13. 37	62. 48. 58
17		55. 48. 59	54. 25. 34	53. 2. 20	51. 39. 16
18		44. 46. 23	43. 24. 17	42. 2. 20	40. 40. 31
24	Antares.	44. 7. 15	42. 37. 35	41. 7. 52	39. 38. 4
25		32. 7. 53	30. 37. 31	29. 7. 1	27. 36. 23
26	α Aquilæ.	76. 54. 8	75. 34. 58	74. 15. 50	72. 56. 44
27		66. 22. 9	65. 3. 34	63. 45. 10	62. 26. 56
28	β Capricorni.	50. 11. 14	48. 36. 52	47. 2. 15	45. 27. 24
29		37. 29. 26	35. 53. 4	34. 16. 27	32. 39. 34
30	ι Pegaſi.	74. 45. 51	73. 9. 53	71. 33. 37	69. 57. 4

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	89. 39. 28	91. 8. 6	92. 37. 6	94. 6. 28
2		101. 38. 49	103. 10. 27	104. 42. 29	106. 14. 55
3		114. 3. 10	115. 38. 7	117. 13. 30	118. 49. 20
1	Spica ♍	47. 45. 17	49. 21. 4	50. 57. 14	52. 33. 46
2		60. 42. 14	62. 21. 7	64. 0. 25	65. 40. 6
3	Antares.	28. 15. 37	29. 58. 1	31. 40. 54	33. 24. 13
4		42. 7. 42	43. 53. 44	45. 40. 12	47. 27. 5
5		56. 27. 56	58. 17. 23	60. 7. 14	61. 57. 27
6	β Capricorni.	16. 59. 54	18. 48. 34	20. 38. 0	22. 28. 9
7		31. 47. 8	33. 40. 6	35. 33. 19	37. 26. 43
8	α Aquilæ.	53. 11. 24	54. 42. 48	56. 15. 6	57. 48. 13
9		65. 43. 20	67. 19. 43	68. 56. 23	70. 33. 17
10	α Pegaſi.	30. 51. 54	32. 28. 39	34. 6. 18	35. 44. 45
11		44. 5. 30	45. 46. 32	47. 27. 40	49. 8. 50
12		57. 33. 17	59. 13. 42	60. 53. 53	62. 33. 50
13	ι Arietis.	27. 22. 34	29. 3. 12	30. 43. 32	32. 23. 34
14		40. 39. 17	42. 17. 28	43. 55. 19	45. 32. 52
15	Aldebaran.	22. 50. 57	24. 18. 27	25. 46. 32	27. 15. 7
16		34. 42. 20	36. 12. 9	37. 41. 58	39. 11. 48
17		46. 40. 19	48. 9. 48	49. 39. 11	51. 8. 31
18		58. 33. 48	60. 2. 35	61. 31. 17	62. 59. 54
19	Pollux.	28. 7. 23	29. 34. 59	31. 2. 38	32. 30. 19
20		39. 49. 20	41. 17. 12	42. 45. 5	44. 13. 0
26	The Sun.	37. 29. 58	38. 52. 50	40. 15. 54	41. 39. 7
27		48. 37. 57	50. 2. 18	51. 26. 52	52. 51. 38
28		59. 58. 40	61. 24. 46	62. 51. 7	64. 17. 42
29		71. 34. 36	73. 2. 48	74. 31. 18	76. 0. 6
30		83. 28. 58	84. 59. 41	86. 30. 45	88. 2. 9

SEPTEMBER 1767.

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	95. 36. 11	97. 6. 16	98. 36. 44	100. 7. 35
2		107. 47. 45	109. 20. 58	110 54. 37	112. 28. 41
3		120. 25. 36			
1	Spica ♍	54. 10. 42	55. 48. 0	57. 25. 41	59. 3. 46
2		67. 20. 13	69. 0. 45	70. 41. 42	72. 23. 4
3	Antares.	35. 8. 0	36. 52. 15	38. 36. 57	40. 22. 6
4		49. 14. 25	51. 2. 10	52. 50. 21	54. 38. 56
5		63. 48. 3	65. 38. 58	67. 30. 15	69. 21. 53
6	β Capricorni.	24. 18. 56	26. 10. 19	28. 2. 12	29. 54. 29
7		39. 20. 17	41. 13. 59	43. 7. 45	45. 1. 29
8	α Aquilæ.	59. 22. 4	60. 56. 35	62. 31. 41	64. 7. 17
9		72. 10. 21	73. 47. 31	75. 24. 45	77. 1. 56
10	α Pegaſi.	37. 23. 55	39. 3. 44	40. 44. 2	42. 24. 38
11		50. 49. 57	52. 30. 59	54. 11. 55	55. 52. 41
12		64. 13. 31	65. 52. 55	67. 32. 0	69. 10. 46
13	α Arietis.	34. 3. 18	35. 42. 46	37. 21. 55	39. 0. 45
14		47. 10. 4	48. 46. 56	50. 23. 28	51. 59. 42
15	Aldebaran.	28. 44. 6	30. 13. 24	31. 42. 56	33. 12. 35
16		40. 41. 39	42. 11. 24	43. 41. 6	45. 10. 44
17		52. 37. 45	54. 6. 54	55. 35. 57	57. 4. 55
18		64. 28. 26	65. 56. 53	67. 25. 14	68. 53. 31
19	Pollux.	33. 58. 2	35. 25. 49	36. 53. 38	38. 21. 28
20		45. 40. 55	47. 8. 52	48. 36. 50	50. 4. 49
26	The Sun.	43. 2. 32	44. 26. 6	45. 49. 52	47. 13. 48
27		54. 16. 36	55. 41. 47	57. 7. 11	58. 32. 49
28		65. 44. 33	67. 11. 39	68. 39. 2	70. 6. 41
29		77. 29. 13	78. 58. 40	80. 28. 27	81. 58. 32
30		89. 33. 55	91. 6. 4	92. 38. 33	94. 11. 26

OCTOBER 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Th.	Remigius.
2	F.	
3	Sa.	
4	*Su.*	16*th Sunday after Trinity.*
5	M.	
6	Tu.	Faith.
7	W.	
8	Th.	
9	F.	S.Denys. [Terms begin.
10	Sa.	Oxford and Cambridge
11	*Su.*	17*th Sunday after Trinity.*
12	M.	
13	Tu.	Tranf. of K. Edw. Conf.
14	W.	
15	Th.	
16	F.	
17	Sa.	Etheldred.
18	*Su.*	18*th Sunday after Trinity.*
19	M.	[St. Luke.
20	Tu.	
21	W.	
22	Th.	
23	F.	
24	Sa.	[Geo. III. Accef. Crif.
25	*Su.*	19*th Sun. after Trin.* K.
26	M.	K. Geo. III. proclaimed
27	Tu.	[1760.
28	W.	St. Simon and St. Jude.
29	Th.	
30	F.	
31	Sa.	

Phafes of the Moon.

	D.	H.	′
Full Moon —	7.	4.	33
Laft Quarter —	14.	3.	14
New Moon —	22.	7.	59
Firft Quarter —	29.	23.	13

Other Phenomena.

D.
4. ☾ θ ♒ 6^{h}. 31′.
5. ♀ Stationary.
7. ☾ ν ♓ 19^{h}. 25′.
10. ☾ η Pleiadum 1^{h}. 20′.
11. ☌ ♃ ♂ diff. Lat. 14′.
☾ 3 poft ζ ♉ 21^{h}. 28′.
13. ☾ ε ♊ 0^{h}. 0′.
15. ☾ δ ♋ 7^{h}. 27′.
16. ♄ Stationary.
19. ☾ υ ♌ 4^{h}. 48′.
23. ☉ enters ♏ at 3^{h}. 25′.
24. ♂ θ ♍ diff. Lat. 58′.
☿ α ♎ diff. Lat. 1°. 7′.
25. ☾ σ ♏ 4^{h}. 50′.
☾ α ♏ 8^{h}. 33′.
27. ☾ λ ♐ 10^{h}. 27′.
31. ☾ θ ♒ 15^{h}. 2′.

OCTOBER 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declin. South.	Equat. of Time Sub.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Th.	6. 8. 2. 36	12. 29. 33	3. 11. 41	10. 20	19
2	F.	6. 9. 1. 44	12. 33. 10	3. 35. 1	10. 39	18
3	Sa.	6. 10. 0. 53	12. 36. 48	3. 58. 18	10. 57	18
4	Su.	6. 11. 0. 5	12. 40. 27	4. 21. 32	11. 15	18
5	M.	6. 11. 59. 18	12. 44. 5	4. 44. 43	11. 33	18
6	Tu.	6. 12. 58. 33	12. 47. 44	5. 7. 51	11. 51	17
7	W.	6. 13. 57. 49	12. 51. 24	5. 30. 54	12. 8	16
8	Th.	6. 14. 57. 9	12. 55. 4	5. 53. 54	12. 24	16
9	F.	6. 15. 56. 30	12. 58. 44	6. 16. 49	12. 40	16
10	Sa.	6. 16. 55. 53	13. 2. 24	6. 39. 39	12. 56	16
11	Su.	6. 17. 55. 19	13. 6. 6	7. 2. 24	13. 12	15
12	M.	6. 18. 54. 47	13. 9. 47	7. 25. 2	13. 27	15
13	Tu.	6. 19. 54. 17	13. 13. 30	7. 47. 35	13. 42	14
14	W.	6. 20. 53. 49	13. 17. 12	8. 10. 2	13. 56	13
15	Th.	6. 21. 53. 24	13. 20. 56	8. 32. 22	14. 9	12
16	F.	6. 22. 53. 1	13. 24. 40	8. 54. 35	14. 21	12
17	Sa.	6. 23. 52. 42	13. 28. 24	9. 16. 40	14. 33	11
18	Su.	6. 24. 52. 24	13. 32. 9	9. 38. 38	14. 44	11
19	M.	6. 25. 52. 8	13. 35. 55	10. 0. 26	14. 55	10
20	Tu.	6. 26. 51. 55	13. 39. 41	10. 22. 7	15. 5	10
21	W.	6. 27. 51. 44	13. 43. 29	10. 43. 38	15. 15	9
22	Th.	6. 28. 51. 35	13. 47. 16	11. 5. 0	15. 24	8
23	F.	6. 29. 51. 28	13. 51. 5	11. 26. 12	15. 32	8
24	Sa.	7. 0. 51. 23	13. 54. 54	11. 47. 13	15. 40	7
25	Su.	7. 1. 51. 19	13. 58. 44	12. 8. 0	15. 47	5
26	M.	7. 2. 51. 18	14. 2. 34	12. 28. 39	15. 52	5
27	Tu.	7. 3. 51. 18	14. 6. 25	12. 49. 10	15. 57	5
28	W.	7. 4. 51. 20	14. 10. 17	13. 9. 26	16. 2	4
29	Th.	7. 5. 51. 23	14. 14. 10	13. 29. 28	16. 6	4
30	F.	7. 6. 51. 28	14. 18. 4	13. 49. 18	16. 10	2
31	Sa.	7. 7. 51. 34	14. 21. 58	14. 8. 54	16. 12	1

OCTOBER 1767.

Days.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	16. 2,8	1. 4,3	2. 27,8	9. 999999	9. 27. 1
7	16. 4,5	1. 4,6	2. 28,4	9. 999233	9. 26. 42
13	16. 6,1	1. 5,0	2. 28,9	9. 998496	9. 26. 22
19	16. 7,7	1. 5,5	2. 29,3	9. 997781	9. 26. 3
25	16. 9,4	1. 6,1	2. 29,8	9. 997072	9. 25. 44

OCTOBER 1767.

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Paſſage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
MERCURY. ſup. ☌ $8^{d}.\ 2^{h}.\ 40'$.						
1	5. 17. 51	5. 56 N	6. 2. 35	1. 38 N	0. 28 S	23. 45
7	6. 11. 13	3. 58	6. 13. 10	1. 9	4. 8	0. 0
13	7. 1. 11	1. 46	6. 23. 20	0. 32	8. 35	0. 14
19	7. 19. 4	0. 25 S	7. 3. 7	0. 8 S	12. 41	0. 27
25	8. 5. 51	2. 25	7. 12. 32	0. 48	16. 23	0. 41
VENUS. inf. ☌ $26^{d}.\ 14^{h}$.						
1	11. 22. 38	3. 21 S	7. 10. 44	6. 48 S	21. 31 S	1. 55
7	0. 2. 11	3. 14	7. 11. 8	7. 12	22. 0	1. 34
13	0. 11. 44	3. 1	7. 10. 8	7. 18	21. 47	1. 7
19	0. 21. 18	2. 43	7. 7. 46	7. 0	20. 44	0. 36
25	1. 0. 54	2. 20	7. 4. 25	6. 14	18. 52	0. 1
MARS.						
1	5. 25. 4	1. 29 N	5. 29. 57	0. 56 N	0. 53 N	23. 30
7	5. 27. 44	1. 25	6. 3. 50	0. 54	0. 42 S	23. 23
13	6. 0. 25	1. 22	6. 7. 45	0. 52	2. 17	23. 15
19	6. 3. 6	1. 19	6. 11. 39	0. 50	3. 51	23. 7
25	6. 5. 49	1. 15	6. 15. 38	0. 48	5. 25	22. 59
JUPITER.						
1	6. 3. 46	1. 19 N	6. 4. 25	1. 6 N	0. 45 S	23. 46
7	6. 4. 13	1. 19	6. 5. 43	1. 7	1. 15	23. 28
13	6. 4. 40	1. 19	6. 7. 0	1. 7	1. 45	23. 11
19	6. 5. 7	1. 19	6. 8. 17	1. 7	2. 15	22. 53
25	6. 5. 34	1. 19	6. 9. 33	1. 8	2. 45	22. 35
SATURN.						
1	2. 27. 15	1. 2 S	3. 3. 36	1. 3 S	22. 22 N	17. 43
7	2. 27. 28	1. 1	3. 3. 44	1. 3	22. 22	17. 22
13	2. 27. 42	1. 0	3. 3. 48	1. 3	22. 22	17. 0
19	2. 27. 55	1. 0	3. 3. 48	1. 3	22. 22	16. 38
25	2. 28. 9	0. 59	3. 3. 44	1. 3	22. 22	16. 15

JUPITER's Satellites will not be viſible this Month, being too near the SUN.

OCTOBER 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	Th.	9. 13. 47. 21	9. 20. 33. 38	1. 15. 3 S	0. 39. 41 S
2	F.	9. 27. 26. 2	10. 4. 24. 50	0. 3. 14 S	0. 33. 47 N
3	Sa.	10. 11. 30. 0	10. 18. 41. 38	1. 10. 51 N	1. 47. 19
4	Su.	10. 25. 59. 22	11. 3. 22. 58	2. 22. 30	2. 55. 42
5	M.	11. 10. 51. 31	11. 18. 24. 14	3. 26. 16	3. 53. 26
6	Tu.	11. 26. 0. 6	0. 3. 37. 42	4. 16. 39	4. 35. 23
7	W.	0. 11. 15. 43	0. 18. 52. 52	4. 49. 10	4. 57. 45
8	Th.	0. 26. 27. 28	1. 3. 58. 18	5. 1. 2	4. 59. 5
9	F.	1. 11. 24. 11	1. 8. 44. 5	4. 52. 3	4. 40. 18
10	Sa.	1. 25. 57. 21	2. 3. 3. 23	4. 24. 6	4. 4. 7
11	Su.	2. 10. 1. 45	2. 16. 52. 36	3. 40. 48	3. 14. 39
12	M.	2. 23. 35. 57	3. 0. 12. 3	2. 46. 13	2. 16. 0
13	Tu.	3. 6. 41. 26	3. 13. 4. 26	1. 44. 33	1. 12. 16
14	W.	3. 19. 21. 47	3. 25. 34. 1	0. 39. 28 N	0. 6. 46 N
15	Th.	4. 1. 41. 49	4. 7. 45. 48	0. 25. 40 S	0. 57. 29 S
16	F.	4. 13. 46. 43	4. 19. 45. 11	1. 28. 20	1. 58. 0
17	Sa.	4. 25. 41. 48	5. 1. 37. 6	2. 26. 11	2. 52. 39
18	Su.	5. 7. 31. 41	5. 13. 26. 4	3. 17. 10	3. 39. 32
19	M.	5. 19. 20. 33	5. 25. 15. 36	3. 59. 30	4. 16. 55
20	Tu.	6. 1. 11. 39	6. 7. 8. 49	4. 31. 34	4. 43. 17
21	W.	6. 13. 7. 22	6. 19. 7. 34	4. 51. 55	4. 57. 19
22	Th.	6. 25. 9. 28	7. 1. 13. 9	4. 59. 27	4. 58. 11
23	F.	7. 7. 18. 49	7. 13. 26. 31	4. 53. 28	4. 45. 24
24	Sa.	7. 19. 36. 17	7. 25. 48. 18	4. 33. 56	4. 19. 5
25	Su.	8. 2. 2. 40	8. 8. 19. 24	4. 1. 6	3. 39. 59
26	M.	8. 14. 38. 49	8. 21. 0. 58	3. 16. 0	2. 49. 23
27	Tu.	8. 27. 26. 15	9. 3. 54. 41	2. 20. 19	1. 49. 15
28	W.	9. 10. 26. 45	9. 17. 2. 35	1. 16. 22	0. 42. 8 S
29	Th.	9. 23. 42. 41	10. 0. 27. 8	0. 6. 58 S	0. 28. 45 N
30	F.	10. 7. 16. 18	10. 14. 10. 18	1. 4. 28 N	1. 39. 38
31	Sa.	10. 21. 9. 25	10. 28. 13. 31	2. 13. 44	2. 46. 15

OCTOBER 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declinat. at Noon.	☽'s Declin. at Midn.
			h '	° '	° '	° '	° '
1	Th.	10	6. 46	285. 7	292. 21	24. 0 S	22. 33 S
2	F.	11	7. 41	299. 30	306. 37	20. 45	18. 38
3	Sa.	12	8. 35	313. 38	320. 34	16. 13	13. 32
4	Su.	13	9. 29	327. 26	334. 15	10. 38	7. 33
5	M.	14	10. 22	341. 2	347. 47	4. 19 S	1. 1 S
6	Tu.	15	11. 14	354. 35	1. 36	2. 20 N	5. 39 N
7	W.	16	12. 9	8. 28	15. 29	8. 54	11. 59
8	Th.	17	13. 5	22. 39	29. 57	14. 53	17. 33
9	F.	18	14. 4	37. 22	44. 53	19. 54	21. 54
10	Sa.	19	15. 3	52. 29	60. 9	23. 32	24. 47
11	Su.	20	16. 2	67. 47	75. 23	25. 37	26. 3
12	M.	21	17. 0	82. 52	90. 13	26. 5	25. 44
13	Tu.	22	17. 54	97. 23	104. 20	25. 2	24. 2
14	W.	23	18. 44	111. 4	117. 34	22. 43	21. 10
15	Th.	24	19. 31	123. 51	129. 56	19. 24	17. 25
16	F.	25	20. 14	135. 49	141. 32	15. 18	13. 3
17	Sa.	26	20. 55	147. 8	152. 36	10. 41	8. 13
18	Su.	27	21. 35	157. 59	163. 20	5. 42	3. 9 N
19	M.	28	22. 14	168. 39	173. 57	0. 33 N	2. 3 S
20	Tu.	29	22. 55	179. 17	184. 41	4. 38 S	7. 10
21	W.	30	23. 37	190. 9	195. 43	9. 40	12. 5
22	Th.	1	☌	201. 25	207. 16	14. 23	16. 34
23	F.	2	0. 23	213. 17	219. 27	18. 36	20. 25
24	Sa.	3	1. 11	225. 49	232. 21	22. 3	23. 26
25	Su.	4	2. 2	239. 4	245. 56	24. 32	25. 21
26	M.	5	2. 56	252. 55	260. 1	25. 50	25. 59
27	Tu.	6	3. 51	267. 9	274. 19	25. 47	25. 14
28	W.	7	4. 46	281. 28	288. 34	24. 20	23. 5
29	Th.	8	5. 41	295. 36	302. 33	21. 30	19. 37
30	F.	9	6. 33	309. 24	316. 9	17. 26	15. 0
31	Sa.	10	7. 24	322. 49	329. 25	12. 21	9. 30

OCTOBER 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor.Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	Th.	15. 49	15. 56	58. 3	58. 29	0143	0111
2	F.	16. 3	16. 10	58. 55	59. 21	0079	0047
3	Sa.	16. 17	16. 23	59. 46	60. 9	0017	9989
4	Su.	16. 29	16. 34	60. 30	60. 49	9964	9941
5	M.	16. 38	16. 41	61. 4	61. 15	9923	9910
6	Tu.	16. 43	16. 44	61. 22	61. 24	9902	9900
7	W.	16. 43	16. 41	61. 21	61. 14	9903	9912
8	Th.	16. 38	16. 33	61. 2	60. 45	9926	9946
9	F.	16. 28	16. 21	60. 25	60. 2	9970	9998
10	Sa.	16. 14	16. 7	59. 35	59. 8	0030	0063
11	Su.	15. 59	15. 51	58. 39	58. 10	0099	0135
12	M.	15. 43	15. 35	57. 41	57. 13	0171	0206
13	Tu.	15. 28	15. 21	56. 46	56. 21	0241	0273
14	W.	15. 15	15. 9	55. 58	55. 36	0302	0331
15	Th.	15. 4	14. 59	55. 17	55. 0	0356	0378
16	F.	14. 55	14. 52	54. 46	54. 34	0396	0413
17	Sa.	14. 50	14. 47	54. 24	54. 17	0426	0435
18	Su.	14. 46	14. 45	54. 11	54. 8	0443	0447
19	M.	14. 45	14. 45	54. 7	54. 7	0448	0448
20	Tu.	14. 46	14. 46	54. 10	54. 13	0444	0440
21	W.	14. 48	14. 50	54. 18	54. 25	0434	0424
22	Th.	14. 52	14. 54	54. 33	54. 41	0414	0403
23	F.	14. 57	15. 0	54. 51	55. 2	0390	0375
24	Sa.	15. 3	15. 6	55. 14	55. 26	0359	0344
25	Su.	15. 10	15. 14	55. 40	55. 54	0326	0307
26	M.	15. 18	15. 23	56. 10	56. 26	0287	0266
27	Tu.	15. 27	15. 32	56. 43	57. 1	0244	0221
28	W.	15. 37	15. 42	57. 19	57. 39	0199	0174
29	Th.	15. 48	15. 53	58. 0	58. 19	0147	0124
30	F.	15. 58	16. 4	58. 39	58. 59	0099	0074
31	Sa.	16. 9	16. 15	59. 18	59. 37	0051	0028

OCTOBER 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	α Pegaſi.	68. 20. 13	66. 43. 8	65. 5. 46	63. 28. 10
2		55. 16. 51	53. 38. 3	51. 59. 7	50. 20. 7
3		42. 5. 13	40. 26. 38	38. 48. 21	37. 10. 30
4	α Arietis.	68. 21. 19	66. 31. 11	64. 40. 44	62. 50. 0
5		53. 32. 26	51. 40. 15	49. 47. 54	47. 55. 25
6		38. 31. 16	36. 38. 21	34. 45. 29	32. 52. 42
7	Aldebaran.	56. 10. 1	54. 18. 14	52. 26. 38	50. 35. 16
8		41. 23. 32	39. 34. 27	37. 45. 55	35. 57. 58
9		27. 9. 53	25. 27. 24	23. 46. 21	22. 6. 55
10	Pollux.	53. 50. 4	52. 4. 0	50. 18. 25	48. 33. 20
11		39. 55. 39	38. 31. 41	36. 32. 17	34. 51. 28
12	Regulus.	63. 0. 54	61. 21. 15	59. 41. 59	58. 3. 10
13		49. 55. 7	48. 18. 44	46. 42. 44	45. 7. 7
14		37. 14. 23	35. 40. 52	34. 7. 41	32. 34. 50
12	The Sun.	115. 16. 57	113. 44. 59	112. 13. 26	110. 42. 17
13		103. 12. 28	101. 43. 41	100. 15. 16	98. 47. 13
14		91. 32. 2	90. 5. 59	88. 40. 14	87. 14. 46
15		80. 11. 36	78. 47. 45	77. 24. 7	76. 0. 43
16		69. 6. 45	67. 44. 30	66. 22. 24	65. 0. 28
17		58. 12. 50	56. 51. 40	55. 30. 36	54. 9. 37
18		47. 25. 55	46. 5. 21	44. 44. 50	43. 24. 23
24	α Aquilæ	74. 5. 55	72. 46. 0	71. 26. 9	70. 6. 22
25		63. 29. 33	62. 10. 46	60. 52. 14	59. 33. 58
26	Fomalhaut	75. 43. 23	74. 16. 53	72. 50. 20	71. 23. 46
27		64. 10. 50	62. 44. 24	61. 18. 5	59. 51. 52
28	α Pegaſi.	71. 27. 34	69. 52. 34	68. 17. 24	66. 42. 5
29		58. 43. 15	57. 7. 8	55. 30. 58	53. 54. 45
30		45. 53. 31	44. 17. 30	42. 41. 41	41. 6. 6
31	α Arietis.	73. 8. 24	71. 23. 3	69. 37. 24	67. 51. 29

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours. ° ′ ″	15 Hours. ° ′ ″	18 Hours. ° ′ ″	21 Hours. ° ′ ″
1	α Pegaſi.	61. 50. 18	60. 12. 13	58. 33. 56	56. 55. 29
2		48. 41. 4	47. 2. 0	45. 22. 58	43. 44. 1
3		35. 33. 13	33. 56. 36	32. 20. 51	30. 46. 10
4	α Arietis.	60. 58. 58	59. 7. 40	57. 16. 9	55. 24. 24
5		46. 2. 45	44. 9. 57	42. 17. 6	40. 24. 13
6	Aldebaran	63. 38. 31	61. 46. 16	59. 54. 5	58. 1. 59
7		48. 44. 12	46. 53. 27	45. 3. 4	43. 13. 5
8		34. 10. 40	32. 24. 6	30. 38. 23	28. 53. 35
9	Pollux.	60. 58. 55	59. 11. 2	57. 23. 36	55. 36. 36
10		46. 48. 45	45. 4. 41	43. 21. 9	41. 38. 8
11		33. 11. 14	31. 31. 37	29. 52. 39	28. 14. 19
12	Regulus.	56. 24. 44	54. 46. 43	53. 9. 7	51. 31. 55
13		43. 31. 52	41. 56. 58	40. 22. 26	38. 48. 14
11	The Sun.	121. 29. 4	119. 55. 23	118. 22. 9	116. 49. 21
12		109. 11. 33	107. 41. 14	106. 11. 17	104. 41. 41
13		97. 19. 31	95. 52. 9	94. 25. 7	92. 58. 25
14		85. 49. 36	84. 24. 42	83. 0. 4	81. 35. 42
15		74. 37. 32	73. 14. 33	71. 51. 44	70. 29. 9
16		63. 38. 41	62. 17. 2	60. 55. 31	59. 34. 6
17		52. 48. 44	51. 27. 56	50. 7. 11	48. 46. 31
18		42. 3. 59	40. 43. 37	39. 23. 18	38. 3. 2
24	α Aquilæ.	68. 46. 42	67. 27. 9	66. 7. 46	64. 48. 34
25	Fomalhaut.	81. 28. 44	80. 2. 31	78. 36. 13	77. 9. 50
26		69. 57. 10	68. 30. 32	67. 3. 56	65. 37. 22
27	α Pegaſi.	77. 45. 57	76. 11. 37	74. 37. 6	73. 2. 24
28		65. 6. 36	63. 30. 57	61. 55. 10	60. 19. 16
29		52. 18. 29	50. 42. 11	49. 5. 54	47. 29. 40
30		39. 30. 48	37. 55. 53	36. 21. 25	34. 47. 28
31	α Arietis.	66. 5. 16	64. 18. 44	62. 31. 55	60. 44. 50

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	95. 44. 40	97. 18. 16	98. 52. 15	100. 26. 38
2		108. 24. 18	110. 1. 0	111. 38. 5	113. 15. 34
1	Antares.	37. 21. 24	39. 2. 44	40. 44. 28	42. 26. 34
2		51. 3. 4	52. 47. 34	54. 32. 28	56. 17. 46
3		65. 10. 10	66. 57. 50	68. 45. 53	70. 34. 20
4	β Capricorni.	25. 13. 45	27. 2. 41	28. 52. 10	30. 42. 8
5		39. 57. 43	41. 49. 48	43. 42. 10	45. 34. 45
6	α Aquilæ.	59. 45. 6	61. 19. 41	62. 54. 58	64. 30. 52
7		72. 37. 20	74. 15. 35	75. 54. 2	77. 32. 39
8	α Pegaſi.	38. 4. 5	39. 46. 13	41. 28. 53	43. 11. 58
9		51. 50. 35	53. 34. 29	55. 18. 19	57. 2. 3
10	α Arietis.	22. 3. 42	23. 48. 2	25. 32. 15	27. 16. 18
11		35. 52. 38	37. 34. 56	39. 16. 53	40. 58. 29
12	Aldebaran	18. 55. 17	20. 22. 46	21. 51. 27	23. 21. 7
13		30. 57. 22	32. 29. 15	34. 1. 10	35. 33. 3
14		43. 11. 17	44. 42. 32	46. 13. 38	47. 44. 34
15		55. 16. 39	56. 46. 33	58. 16. 16	59. 45. 50
16	Pollux.	25. 4. 19	26. 31. 47	27. 59. 20	29. 26. 56
17		36. 45. 32	38. 13. 17	39. 41. 2	41. 8. 47
18	Regulus.	11. 32. 32	12. 58. 41	14. 25. 10	15. 51. 56
19		23. 9. 11	24. 37. 2	26. 5. 0	27. 33. 4
20		34. 54. 48	36. 23. 24	37. 52. 5	39. 20. 52
26	The Sun.	41. 53. 46	43. 20. 49	44. 48. 8	46. 15. 40
27		53. 37. 4	55. 6. 1	56. 35. 14	58. 4. 42
28		65. 35. 47	67. 6. 45	68. 38. 0	70. 9. 31
29		77. 51. 18	79. 24. 29	80. 57. 56	82. 31. 41
30		90. 24. 49	92. 0. 18	93. 36. 6	95. 12. 12
31		103. 17. 14	104. 55. 7	106. 33. 16	108. 11. 44
30	Antares.	60. 57. 11	62. 40. 34	64. 24. 15	66. 8. 14
31		74. 52. 44	76. 38. 32	78. 24. 37	80. 11. 0

Diſtances of ☽'s Center from ☉, and from Stars weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	The Sun.	102. 1. 24	103. 36. 32	105. 12. 4	106. 47. 59
2		114. 53. 26	116. 31. 40	118. 10. 18	119. 49. 16
1	Antares.	44. 9. 5	45. 51. 59	47. 35. 17	49. 18. 58
2		58. 3. 28	59. 49. 33	61. 36. 2	63. 22. 54
3	β Capricorni.	18. 4. 30	19. 50. 46	21. 37. 44	23. 25. 25
4		32. 32. 32	34. 23. 19	36. 14. 27	38. 5. 55
5	α Aquilæ.	53. 35. 19	55. 6. 19	56. 38. 20	58. 11. 17
6		66. 7. 19	67. 44. 15	69. 21. 36	70. 59. 19
7	α Pegaſi.	31. 23. 52	33. 2. 21	34. 42. 0	36. 22. 37
8		44. 55. 22	46. 39. 0	48. 22. 47	50. 6. 40
9		58. 45. 40	60. 29. 7	62. 12. 21	63. 55. 20
10	α Arietis.	29. 0. 9	30. 43. 44	32. 27. 2	34. 10. 0
11		42. 39. 43	44. 20. 34	46. 1. 1	47. 41. 2
12	Aldebaran.	24. 51. 33	26. 22. 33	27. 53. 57	29. 25. 35
13		37. 4. 53	38. 36. 39	40. 8. 20	41. 39. 53
14		49. 15. 19	50. 45. 54	52. 16. 19	53. 46. 34
15		61. 15. 14	62. 44. 30	64. 13. 37	65. 42. 36
16	Pollux.	30. 54. 35	32. 22. 17	33. 50. 1	35. 17. 46
17		42. 36. 32	44. 4. 17	45. 32. 1	46. 59. 46
18	Regulus.	17. 18. 58	18. 46. 15	20. 13. 45	21. 41. 24
19		29. 1. 14	30. 29. 29	31. 57. 50	33. 26. 16
26	The Sun.	47. 43. 28	49. 11. 31	50. 39. 48	52. 8. 19
27		59. 34. 23	61. 4. 21	62. 34. 34	64. 5. 3
28		71. 41. 18	73. 13. 23	74. 45. 45	76. 18. 23
29		84. 5. 43	85. 40. 3	87. 14. 41	88. 49. 36
30		96. 48. 37	98. 25. 19	100. 2. 20	101. 39. 38
31		109. 50. 29	111. 29. 32	113. 8. 51	114. 48. 29
30	Antares.	67. 52. 31	69. 37. 7	71. 22. 1	73. 7. 13
31		81. 57. 41	83. 44. 38	85. 31. 52	87. 19. 24

NOVEMBER 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	*Su.*	*20th Sunday after Trinity.*
2	M.	[All Saints.
3	Tu.	On Morrow of All Souls.
4	W.	[1 ret.
5	Th.	Powder Plot. 1605.
6	F.	Leonard. Term begins.
7	Sa.	Pr. H. Fred. born 1745.
8	*Su.*	*21ſt Sunday after Trinity.*
9	M.	
10	Tu.	
11	W.	S. Martin.
12	Th.	On Morrow of S.Martin.
13	F.	Britius. [2 ret.
14	Sa.	[Machutus
15	*Su.*	*22d Sunday after Trinity.*
16	M.	
17	Tu.	Hugh, Bp. of Lincoln.
18	W.	In 8 Days of S. Martin.
19	Th.	[3 ret.
20	F.	Edmund, K. and Mart.
21	Sa.	[Cecilia.
22	*Su.*	*23d Sunday after Trinity.*
23	M.	S. Clement.
24	Tu.	[15 Days of S.Mar. 4 ret.
25	W.	D. of Glo. born 1743. In
26	Th.	
27	F.	
28	Sa.	Term ends.
29	*Su.*	*Advent Sunday.* [b.1719.
30	M.	S. Andr. Prs.Dow.Wales

Phaſes of the Moon.

	D.	H.	′
Full Moon ——	5.	14.	21
Laſt Quarter —	12.	21.	32
New Moon ——	21.	0.	43
Firſt Quarter —	28.	7.	55

Other Phenomena.

D.
4. ☾ η ♓ 6ʰ. 15′.
5. ♀ δ ♏ diff. Lat. 4′.
6. ☾ η Pleiadum 12ʰ. 6′. the moſt Southern eclipſed.
8. ☾ 3 poſt ζ ♉ 7ʰ. 20′.
9. ☾ ε ♊ 9ʰ. 11′.
10. ☾ δ ♊ 0ʰ. 55′.
16. ♀ Stationary.
19. ☿ θ Ophiuchi diff. Lat. 44′.
21. ☉ enters ♐ at 23ʰ. 30′.
♃ θ ♍ diff. Lat. 36′.
♂ λ ♍ diff. Lat. 5′.
22. ☾ θ Ophiuchi 12ʰ. 36′.
☾ ☿ 20ʰ. 13′.
23. ☾ λ ♐ 16ʰ. 3′.
27. ☾ θ ♒ 20ʰ. 56′.
30. ♄ μ ♊ diff. Lat. 12

NOVEMBER 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Afc. in Time.	Sun's Declination South.	Equat. of Time Sub.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Su.	7. 8. 51. 43	14. 25. 53	14. 28. 17	16. 13	1
2	M.	7. 9. 51. 52	14. 29. 48	14. 47. 26	16. 14	0
3	Tu.	7. 10. 52. 3	14. 33. 45	15. 6. 20	16. 14	1
4	W.	7. 11. 52. 17	14. 37. 43	15. 24. 59	16. 13	2
5	Th.	7. 12. 52. 31	14. 41. 41	15. 43. 23	16. 11	3
6	F.	7. 13. 52. 47	14. 45. 40	16. 1. 32	16. 8	3
7	Sa.	7. 14. 53. 4	14. 59. 39	16. 19. 25	16. 5	4
8	Su.	7. 15. 53. 24	14. 53. 40	16. 37. 1	16. 1	5
9	M.	7. 16. 53. 45	14. 57. 42	16. 54. 19	15. 56	5
10	Tu.	7. 17. 54. 8	15. 1. 43	17. 11. 20	15. 51	7
11	W.	7. 18. 54. 33	15. 5. 47	17. 28. 4	15. 44	8
12	Th.	7. 19. 55. 1	15. 9. 51	17. 44. 30	15. 36	9
13	F.	7. 20. 55. 30	15. 13. 56	18. 0. 38	15. 27	9
14	Sa.	7. 21. 56. 1	15. 18. 2	18. 16. 27	15. 18	10
15	Su.	7. 22. 56. 34	15. 22. 9	18. 31. 57	15. 8	12
16	M.	7. 23. 57. 10	15. 26. 17	18. 47. 7	14. 56	12
17	Tu.	7. 24. 57. 47	15. 30. 25	19. 1. 57	14. 44	13
18	W.	7. 25. 58. 25	15. 34. 34	19. 16. 27	14. 31	13
19	Th.	7. 26. 59. 6	15. 38. 44	19. 30. 36	14. 18	14
20	F.	7. 27. 59. 48	15. 42. 55	19. 44. 24	14. 4	15
21	Sa.	7. 29. 0. 32	15. 47. 7	19. 57. 50	13. 49	16
22	Su.	8. 0. 1. 16	15. 51. 20	20. 10. 54	13. 33	17
23	M.	8. 1. 2. 2	15. 55. 34	20. 23. 35	13. 16	17
24	Tu.	8. 2. 2. 50	15. 59. 48	20. 35. 54	12. 59	18
25	W.	8. 3. 3. 39	16. 4. 3	20. 47. 50	12. 41	20
26	Th.	8. 4. 4. 28	16. 8. 19	20. 59. 23	12. 21	20
27	F.	8. 5. 5. 18	16. 12. 35	21. 10. 32	12. 1	20
28	Sa.	8. 6. 6. 10	16. 16. 52	21. 21. 17	11. 41	22
29	Su.	8. 7. 7. 2	16. 21. 9	21. 31. 37	11. 19	21
30	M.	8. 8. 7. 55	16. 25. 28	21. 41. 33	10. 58	22

NOVEMBER 1767.

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	16. 11,0	1. 6,8	2. 30,4	9. 996256	9. 25. 22
7	16. 12,6	1. 7,6	2. 30,8	9. 995611	9. 25. 3
13	16. 13,9	1. 8,3	2. 31,2	9. 995034	9. 24. 44
19	16. 15,1	1. 8,9	2. 31,7	9. 994509	9. 24. 25
25	16. 16,1	1. 9,6	2. 32,0	9. 994024	9. 24. 6

Eclipſes of the SATELLITES of JUPITER.

I. Satellite.
Immerſions.

Days	h ′ ″
2	7. 8. 41
4	1. 37. 2
5	20. 5. 21
7	14. 33. 36
9	9. 1. 51
11	3. 30. 3
12	21. 58. 10
14	16*26. 14
16	10. 54. 15
18	5. 22. 14
19	23. 50. 11
21	18*18. 6
23	12. 45. 55
25	7. 13. 48
27	1. 41. 31
28	20. 9. 15
30	14. 36. 57

II. Satellite.
Immerſions.

Days	h ′ ′
2	16* 8. 47
6	5. 26. 10
9	18*43. 24
13	8. 0. 23
16	21. 17. 1
20	10. 33. 31
23	23. 49. 44
27	13. 5. 44

III. Satellite.

Days	h ′ ″
1	14. 56. 16 I
1	17*35. 4 E
8	18. 54. 4 I
8	21. 31. 46 E
15	22. 51. 4 I
16	1. 27. 40 E
23	2. 47. 18 I
23	5. 22. 48 E
30	6. 42. 49 I
30	9. 17. 13 E

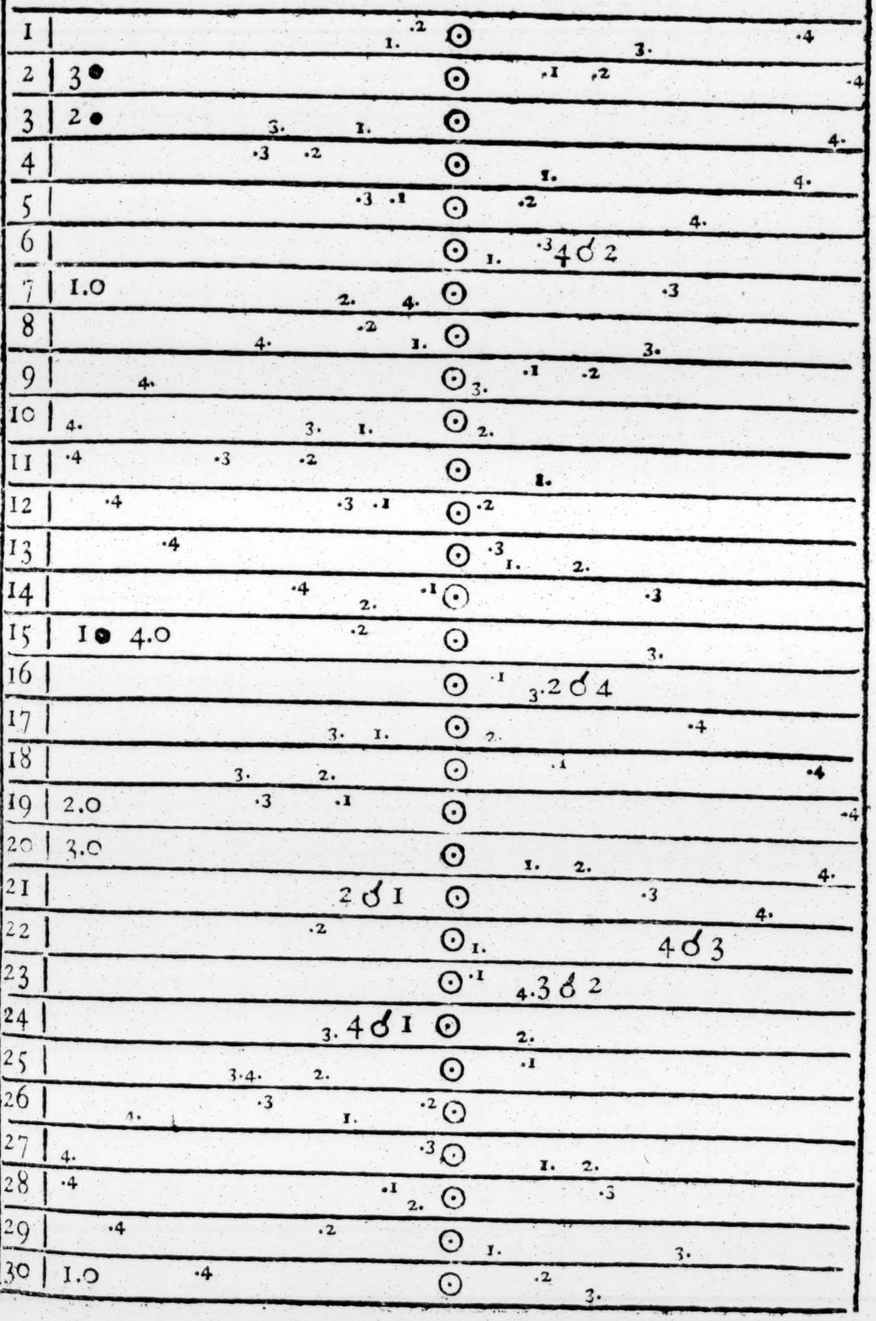
IV. Satellite.

6	5. 37. 46 I
6	7. 22. 42 E
22	23. 35. 20 I
23	1. 6. 52 E

NOVEMBER 1767.

Days.	Heliocentric Longitude. s ° ′	Heliocentric Latitude. ° ′	Geocentric Longitude. s ° ′	Geocentric Latitude. ° ′	Declination. ° ′	Passage over Merid. h ′
MERCURY. greateſt Elong. 22^{d}						
1	8. 25. 5	4. 27 S	7. 23. 9	1. 31 S	20. 2 S	0. 56
7	9. 12. 10	5. 50	8. 1. 57	2. 2	22. 34	1. 8
13	10. 0. 39	6. 45	8. 10. 23	2. 24	24. 25	1. 20
19	10. 21. 31	6. 57	8. 18. 9	2. 32	25. 28	1. 29
25	11. 15. 58	6. 3	8. 24. 35	2. 17	25. 38	1. 32
VENUS.						
1	1. 12. 6	1. 49 S	7. 0. 15	4. 48 S	16. 4 S	23. 15
7	1. 21. 44	1. 19	6. 27. 24	3. 19	13. 39	22. 42
13	2. 1. 23	0. 46	6. 25. 50	1. 48	11. 41	22. 15
19	2. 11. 2	0. 12	6. 25. 45	0. 26	10. 23	21. 53
25	2. 20. 43	0. 22 N	6. 27. 3	0. 42 N	9. 47	21. 35
MARS.						
1	6. 9. 0	1. 10 N	6. 20. 12	0. 45 N	7. 13 S	22. 48
7	6. 11. 44	1. 6	6. 24. 10	0. 43	8. 44	22. 39
13	6. 14. 29	1. 2	6. 28. 9	0. 40	10. 13	22. 30
19	6. 17. 15	0. 57	7. 2. 8	0. 37	11. 39	22. 21
25	6. 20. 3	0. 52	7. 6. 9	0. 35	13. 3	22. 11
JUPITER.						
1	6. 6. 6	1. 19 N	6. 10. 59	1. 9 N	3. 19 S	22. 14
7	6. 6. 34	1. 19	6. 12. 11	1. 9	3. 46	21. 54
13	6. 7. 1	1. 19	6. 13. 22	1. 10	4. 13	21. 33
19	6. 7. 28	1. 19	6. 14. 30	1. 10	4. 37	21. 12
25	6. 7. 55	1. 19	6. 15. 35	1. 11	5. 1	20. 51
SATURN.						
1	2. 28. 25	0. 59 S	3. 3. 34	1. 3 S	22. 22 N	15. 47
7	2. 28. 39	0. 58	3. 3. 20	1. 3	22. 23	15. 23
13	2. 28. 52	0. 58	3. 3. 5	1. 3	22. 23	14. 57
19	2. 29. 6	0. 57	3. 2. 45	1. 3	22. 23	14. 31
25	2. 29. 19	0. 57	3. 2. 23	1. 3	22. 21	14. 4

Configurations of the SATELLITES of JUPITER at 6 o'th' Clock in the Morning.



NOVEMBER 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ″	S ° ′ ″	° ′ ″	° ′ ″
1	Su.	11. 5. 22. 55	11. 12. 36. 55	3. 16. 27 N	3. 43. 53 N
2	M.	11. 19. 55. 26	11. 27. 17. 47	4. 7. 52	4. 27. 59
3	Tu.	0. 4. 43. 16	0. 12. 10. 59	4. 43. 44	4. 54. 41
4	W.	0. 19. 39. 59	0. 27. 8. 57	5. 0. 35	5. 1. 23
5	Th.	1. 4. 36. 47	1. 12. 2. 16	4. 56. 59	4. 47. 37
6	F.	1. 19. 24. 13	1. 26. 41. 39	4. 33. 29	4. 15. 0
7	Sa.	2. 3. 53. 38	2. 10. 59. 33	3. 52. 35	3. 26. 52
8	Su.	2. 17. 58. 53	2. 24. 51. 18	2. 58. 17	2. 27. 40
9	M.	3. 1. 36. 49	3. 8. 15. 19	1. 55. 27	1. 22. 7
10	Tu.	3. 14. 47. 12	3. 21. 12. 40	0. 48. 10 N	0. 13. 56 N
11	W.	3. 27. 32. 21	4. 3. 46. 40	0. 19. 54 S	0. 52. 52 S
12	Th.	4. 9. 56. 15	4. 16. 1. 50	1. 24. 51	1. 55. 38
13	F.	4. 22. 3. 56	4. 28. 3. 19	2. 24. 45	2. 52. 5
14	Sa.	5. 4. 0. 39	5. 9. 56. 30	3. 17. 21	3. 40. 20
15	Su.	5. 15. 51. 32	5. 21. 46. 31	4. 0. 57	4. 18. 55
16	M.	5. 27. 41. 47	6. 3. 37. 57	4. 34. 8	4. 46. 25
17	Tu.	6. 9. 35. 27	6. 15. 34. 41	4. 55. 37	5. 1. 38
18	W.	6. 21. 35. 58	6. 27. 39. 40	5. 4. 19	5. 3. 36
19	Th.	7. 3. 45. 54	7. 9. 54. 56	4. 59. 26	4. 51. 46
20	F.	7. 16. 6. 48	7. 22. 21. 35	4. 40. 37	4. 25. 58
21	Sa.	7. 28. 39. 21	8. 4. 59. 58	4. 8. 1	3. 46. 45
22	Su.	8. 11. 23. 32	8. 17. 50. 3	3. 22. 27	2. 55. 25
23	M.	8. 24. 19. 19	9. 0. 51. 21	2. 25. 50	1. 54. 7
24	Tu.	9. 7. 26. 13	9. 14. 3. 53	1. 20. 35	0. 45. 41 S
25	W.	9. 20. 44. 18	9. 27. 27. 32	0. 9. 54 S	0. 26. 22 N
26	Th.	10. 4. 13. 35	10. 11. 2. 37	1. 2. 33 N	1. 38. 4
27	F.	10. 17. 54. 38	10. 24. 49. 42	2. 12. 30	2. 45. 15
28	Sa.	11. 1. 47. 47	11. 8. 48. 52	3. 15. 42	3. 43. 28
29	Su.	11. 15. 52. 46	11. 22. 59. 37	4. 8. 2	4. 29. 8
30	M.	0. 0. 9. 0	0. 7. 20. 31	4. 46. 0	4. 58. 26

NOVEMBER 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Paſsage over Merid.	☽'s Right Aſcen. at Noon.	☽'s Right Aſc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			h ′	° ′	° ′	° ′	° ′
1	Su.	11	8. 15	336. 0	342. 33	6. 30 S	3. 23 S
2	M.	12	9. 5	349. 7	355. 45	0. 12	3. 1 N
3	Tu.	13	9. 57	2. 28	9. 16	6. 12 N	9. 20
4	W.	14	10. 52	16. 12	23. 19	12. 20	15. 9
5	Th.	15	11. 48	30. 37	38. 2	17. 44	20. 2
6	F.	16	12. 47	45. 37	53. 19	21. 58	23. 34
7	Sa.	17	13. 48	61. 5	68. 53	24. 46	25. 32
8	Su.	18	14. 47	76. 38	84. 17	25. 53	25. 50
9	M.	19	15. 44	91. 46	99. 5	25. 23	24. 35
10	Tu.	20	16. 37	106. 9	112. 58	23. 27	22. 2
11	W.	21	17. 25	119. 33	125. 53	20. 22	18. 29
12	Th.	22	18. 10	132. 0	137. 54	16. 25	14. 13
13	F.	23	18. 53	143. 38	149. 14	11. 53	9. 28
14	Sa.	24	19. 33	154. 43	160. 6	6. 59	4. 27 N
15	Su.	25	20. 12	165. 26	170. 45	1. 52 N	0. 42 S
16	M.	26	20. 52	176. 4	181. 26	3. 16 S	5. 49
17	Tu.	27	21. 33	186. 51	192. 22	8. 20	10. 46
18	W.	28	22. 15	198. 1	203. 48	13. 7	15. 22
19	Th.	29	23. 3	209. 45	215. 53	17. 28	19. 25
20	F.	30	23. 54	222. 13	228. 43	21. 10	22. 40
21	Sa.	1	☌	235. 25	242. 18	23. 54	24. 52
22	Su.	2	0. 47	249. 20	256. 29	25. 31	25. 49
23	M.	3	1. 43	263. 41	270. 57	25. 47	25. 22
24	Tu.	4	2. 38	278. 11	285. 22	24. 36	23. 29
25	W.	5	3. 33	292. 27	299. 26	22. 2	20. 16
26	Th.	6	4. 26	306. 18	313. 3	18. 14	15. 55
27	F.	7	5. 16	319. 39	326. 11	13. 23	10. 40
28	Sa.	8	6. 5	332. 38	339. 2	7. 49	4. 49 S
29	Su.	9	6. 54	345. 24	351. 48	1. 45 S	1. 20 N
30	M.	10	7. 43	358. 14	4. 45	4. 26 N	7. 29

NOVEMBER 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Mdn.
		′ ″	′ ″	′ ″	′ ″		
1	Su.	16. 20	16. 24	59. 55	60. 10	0006	9988
2	M.	16. 27	16. 30	60. 24	60. 35	9971	9958
3	Tu.	16. 32	16. 34	60. 42	60. 47	9950	9944
4	W.	16. 34	16. 33	60. 47	60. 44	9944	9947
5	Th.	16. 31	16. 28	60. 36	60. 25	9957	9970
6	F.	16. 24	16. 19	60. 10	59. 51	9988	0011
7	Sa.	16. 13	16. 6	59. 30	59. 6	0036	0065
8	Su.	15. 59	15. 52	58. 41	58. 15	0096	0129
9	M.	15. 45	15. 38	57. 48	57. 21	0162	0196
10	Tu.	15. 30	15. 24	56. 55	56. 30	0229	0261
11	W.	15. 17	15. 12	56. 7	55. 45	0291	0319
12	Th.	15. 6	15. 1	55. 26	55. 8	0344	0367
13	F.	14. 57	14. 54	54. 53	54. 41	0387	0403
14	Sa.	14. 51	14. 49	54. 31	54. 24	0416	0426
15	Su.	14. 48	14. 48	54. 19	54. 17	0432	0435
16	M.	14. 47	14. 48	54. 17	54. 19	0435	0432
17	Tu.	14. 49	14. 51	54. 24	54. 30	0426	0418
18	W.	14. 53	14. 56	54. 38	54. 47	0407	0395
19	Th.	14. 59	15. 2	54. 58	55. 10	0381	0365
20	F.	15. 5	15. 9	55. 23	55. 37	0348	0329
21	Sa.	15. 13	15. 17	55. 51	56. 6	0311	0292
22	Su.	15. 21	15. 25	56. 21	56. 36	0273	0253
23	M.	15. 30	15. 34	56. 52	57. 7	0233	0214
24	Tu.	15. 38	15. 42	57. 21	57. 36	0196	0177
25	W.	15. 45	15. 49	57. 50	58. 5	0160	0141
26	Th.	15. 53	15. 57	58. 18	58. 31	0125	0108
27	F.	16. 0	16. 4	58. 44	58. 57	0093	0077
28	Sa.	16. 7	16. 10	59. 8	59. 19	0063	0050
29	Su.	16. 12	16. 15	59. 29	59. 37	0036	0028
30	M.	16. 17	16. 18	59. 45	59. 50	0018	0012

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	α Arietis.	58. 57. 29	57. 9. 56	55. 22. 9	53. 34. 8
2		44. 30. 43	42. 41. 29	40. 52. 8	39. 2. 41
3	Aldebaran.	62. 35. 16	60. 45. 42	58. 56. 7	57. 6. 31
4		47. 59. 0	46. 9. 50	44. 20. 53	42. 32. 10
5		33. 33. 37	31. 47. 22	30. 1. 48	28. 17. 2
6	Pollux.	60. 19. 54	58. 31. 12	56. 42. 51	54. 54. 49
7		46. 0. 10	44. 14. 25	42. 29. 9	40. 44. 21
8	Regulus.	68. 37. 52	66. 54. 10	65. 10. 53	63. 28. 2
9		54. 59. 56	53. 19. 37	51. 39. 44	50. 0. 15
10		41. 49. 9	40. 12. 12	38. 35. 38	36. 59. 30
11		29. 4. 43	27. 30. 56	25. 57. 34	24. 24. 37
12		16. 46. 24	15. 16. 13	13. 46. 44	12. 18. 5
11	The Sun.	111. 22. 11	109. 55. 40	108. 29. 28	107. 3. 35
12		99. 58. 35	98. 34. 23	97. 10. 26	95. 46. 44
13		88. 51. 38	87. 29. 13	86. 6. 58	84. 44. 53
14		77. 56. 33	76. 35. 16	75. 14. 6	73. 53. 1
15		67. 8. 35	65. 47. 48	64. 27. 2	63. 6. 18
16		56. 22. 41	55. 1. 53	53. 41. 2	52. 20. 9
17		45. 34. 51	44. 13. 35	42. 52. 12	41. 30. 45
23	α Pegaſi.	86. 58. 55	85. 24. 20	83. 49. 34	82. 14. 39
24		74. 17. 46	72. 41. 58	71. 6. 4	69. 30. 4
25		61. 28. 59	59. 52. 35	58. 16. 12	56. 39. 50
26		48. 38. 44	47. 2. 49	45. 27. 9	43. 51. 44
27	α Arietis.	76. 20. 28	74. 37. 9	72. 53. 39	71. 10. 0
28		62. 29. 24	60. 44. 50	59. 0. 7	57. 15. 17
29		48. 29. 14	46. 43. 40	44. 57. 57	43. 12. 9
30	Aldebaran	67. 6. 7	65. 20. 25	63. 34. 38	61. 48. 47

NOVEMBER 1767.

Diſtances of ☽'s Center from Stars, and from ⊙ eaſt of her.

Days.	Stars Names.	12 Hours. ° ′ ″	15 Hours. ° ′ ″	18 Hours. ° ′ ″	21 Hours. ° ′ ″
1	α Arietis.	51. 45. 53	49. 57. 23	48. 8. 40	46. 19. 47
2	Aldebaran.	69. 52. 42	68. 3. 30	66. 14. 11	64. 24. 46
3		55. 16. 54	53. 27. 17	51. 37. 45	49. 48. 19
4		40. 43. 42	38. 55. 34	37. 7. 48	35. 20. 27
5		26. 33. 13	24. 50. 34	23. 9. 16	21. 29. 27
6	Pollux.	53. 7. 8	51. 19. 48	49. 32. 52	47. 46. 19
7		39. 0. 1	37. 16. 11	35. 32. 54	33. 50. 10
8	Regulus.	61. 45. 34	60. 3. 31	58. 21. 54	56. 40. 42
9		48. 21. 13	46. 42. 35	45. 4. 21	43. 26. 33
10		35. 23. 46	33. 48. 25	32. 13. 27	30. 38. 53
11		22. 52. 5	21. 20. 1	19. 48. 23	18. 17. 10
10	The Sun.	117. 11. 39	115. 43. 46	114. 16. 14	112. 49. 2
11		105. 38. 0	104. 12. 44	102. 47. 44	101. 23. 1
12		94. 23. 17	93. 0. 4	91. 37. 3	90. 14. 14
13		83. 22. 57	82. 1. 9	80. 39. 29	79. 17. 57
14		72. 32. 2	71. 11. 6	69. 50. 13	68. 29. 23
15		61. 45. 35	60. 24. 54	59. 4. 11	57. 43. 27
16		50. 59. 12	49. 38. 14	48. 17. 10	46. 56. 3
22	α Pegaſi.			90. 7. 33	88. 33. 20
23		80. 39. 34	79. 4. 20	77. 28. 56	75. 53. 25
24		67. 53. 59	66. 17. 49	64. 41. 35	63. 5. 19
25		55. 3. 28	53. 27. 8	51. 50. 54	50. 14. 46
26		42. 16. 35	40. 41. 49	39. 7. 28	37. 33. 33
27	α Arietis.	69. 26. 11	67. 42. 12	65. 58. 5	64. 13. 49
28		55. 30. 19	53. 45. 14	52. 0. 1	50. 14. 41
29	Aldebaran	74. 8. 15	72. 22. 49	70. 37. 19	68. 51. 45
30		60. 2. 53	58. 16. 57	56. 31. 1	54. 45. 5

NOVEMBER 1767.

Days.	Diſtances of ☽'s Center from Stars, and from ☉ weſt of her.				
	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	ζ Capricorni.	34. 30. 51	36. 18. 9	38. 5. 46	39. 53. 43
2	α Aquilæ.	54. 43. 5	56. 12. 17	57. 42. 26	59. 13. 28
3		66. 59. 49	68. 34. 54	70. 10. 26	71. 46. 24
4	α Pegaſi.	32. 3. 20	33. 41. 20	35. 20. 24	37. 0. 26
5		45. 31. 36	47. 15. 16	48. 59. 13	50. 43. 23
6		59. 25. 39	61. 10. 6	62. 54. 28	64. 38. 42
7	α Arietis.	29. 51. 33	31. 36. 59	33. 32. 11	35. 7. 11
8		43. 47. 47	45. 30. 53	47. 13. 37	48. 55. 59
9	Aldebaran.	26. 6. 5	27. 40. 5	29. 14. 25	30. 48. 57
10		38. 41. 34	40. 15. 45	41. 49. 45	43. 23. 33
11		51. 9. 21	52. 41. 48	54. 14. 1	55. 45. 59
12		63. 22. 16	64. 52. 51	66. 23. 12	67. 53. 22
13	Pollux.	33. 14. 57	34. 43. 27	36. 11. 54	37. 40. 19
14		45. 1. 32	46. 29. 37	47. 57. 39	49. 25. 37
15	Regulus.	19. 45. 0	21. 12. 28	22. 40. 4	24. 7. 48
16		31. 27. 43	32. 55. 56	34. 24. 14	35. 52. 38
17		43. 16. 8	44. 45. 9	46. 14. 18	47. 43. 34
18		55. 11. 56	56. 42. 4	58. 12. 21	59. 42. 48
19		67. 17. 33	68. 49. 2	70. 20. 42	71. 52. 33
25	The Sun.	47. 40. 41	49. 13. 37	50. 46. 44	52. 20. 3
26		60. 9. 28	61. 43. 55	63. 18. 33	64. 53. 21
27		72. 50. 8	74. 26. 2	76. 2. 5	77. 38. 19
28		85. 42. 3	87. 19. 17	88. 56. 42	90. 34. 16
29		98. 44. 22	100. 22. 51	102. 1. 30	103. 40. 17
30		111. 56. 17	113. 35. 50	115. 15. 30	116. 55. 15
29	α Aquilæ.	51. 22. 31	52. 46. 59	54. 12. 23	55. 38. 44
30		63. 2. 35	64. 33. 21	66. 4. 39	67. 36. 27

Diſtances of ☽'s Center from Stars, and from ☉ weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	β Capricorni.	41. 41. 59	43. 30. 35	45. 19. 27	47. 8. 34
2	α Aquilæ.	60. 45. 20	62. 17. 59	63. 51. 19	65. 25. 16
3		73. 22. 47	74. 59. 30	76. 36. 30	78. 13. 45
4	α Pegaſi.	38. 41. 20	40. 23. 2	42. 5. 24	43. 48. 17
5		52. 27. 43	54. 12. 9	55. 56. 37	57. 41. 8
6	α Arietis.	22. 48. 37	24. 34. 29	26. 20. 15	28. 5. 57
7		36. 51. 57	38. 36. 22	40. 20. 30	42. 4. 17
8	Aldebaran.	19. 55. 50	21. 27. 20	22. 59. 36	24. 32. 33
9		32. 23. 34	33. 58. 11	35. 32. 45	37. 7. 13
10		44. 57. 8	46. 30. 35	48. 3. 42	49. 36. 39
11		57. 17. 43	58. 49. 11	60. 20. 26	61. 51. 28
12	Pollux.	27. 20. 44	28. 49. 19	30. 17. 53	31. 46. 25
13		39. 8. 41	40. 36. 59	42. 5. 13	43. 33. 24
14	Regulus.	13. 57. 2	15. 23. 44	16. 50. 37	18. 17. 43
15		25. 35. 38	27. 3. 32	28. 31. 31	29. 59. 35
16		37. 21. 8	38. 49. 43	40. 18. 25	41. 47. 13
17		49. 12. 58	50. 42. 30	52. 12. 10	53. 41. 58
18		61. 13. 25	62. 44. 11	64. 15. 8	65. 46. 15
19		73. 24. 36			
24	The Sun.	41. 30. 59	43. 3. 6	44. 35. 25	46. 7. 57
25		53. 53. 34	55. 27. 16	57. 1. 9	58. 35. 13
26		66. 28. 21	68. 3. 32	69. 38. 55	71. 14. 23
27		79. 14. 44	80. 51. 18	82. 28. 3	84. 4. 58
28		92. 12. 0	93. 49. 52	95. 27. 53	97. 6. 2
29		105. 19. 14	106. 58. 18	108. 37. 30	110. 16. 49
29	α Aquilæ.	57. 5. 58	58. 34. 2	60. 2. 52	61. 32. 24
30		69. 8. 43	70. 41. 24	72. 14. 27	73. 47. 52

DECEMBER 1767.

Days of the Month.	Days of the Week.	Sundays, Holidays, &c.
1	Tu.	
2	W.	
3	Th.	
4	F.	
5	Sa.	
6	*Su.*	*2d Sunday in Advent.* Nicholas.
7	M.	
8	Tu.	Concept. of V. Mary.
9	W.	
10	Th.	
11	F.	
12	Sa.	
13	*Su.*	*3d Sunday in Advent.* Lucy.
14	M.	
15	Tu.	
16	W.	O Sap. Camb. Term ends.
17	Th.	Oxford Term ends.
18	F.	
19	Sa.	
20	*Su.*	*4th Sunday in Advent.*
21	M.	St. Thomas.
22	Tu.	
23	W.	
24	Th.	
25	F.	Chriſtmas-Day.
26	Sa.	S. Stephen. S. John.
27	*Su.*	*1ſt Sunday after Chriſtm.*
28	M.	Innocents.
29	Tu.	
30	W.	
31	Th.	Silveſter.

Phaſes of the Moon.

	D.	H.	′
Full Moon —	5.	2.	6
Laſt Quarter —	12.	18.	26
New Moon —	20.	16.	15
Firſt Quarter —	27.	15.	40

Other Phenomena.

D.
1. ☾ η ♓ 14ʰ 55′.
3. ♂ α ♎ diff. Lat. 9′.
☾ η Pleiadum 22ʰ 3′.
4. ♀ κ ♍ diff. Lat. 55′.
5. ☾ 3 poſt ζ ♉ 17ʰ 28′.
6. ☾ ε ♊ 19ʰ 4′.
7. ☾ δ ♊ 10ʰ 34′.
10. ☾ ξ ♌ 1ʰ13′.
13. ☿ ϱ Ophiuchi diff. Lat. 12′.
18. ☾ σ ♏ 19ʰ 9′.
☾ α ♏ 22ʰ 48′.
21. ☉ enters ♑ at 11ʰ 48′.
22. ♂ κ ♎ diff. Lat. 18′.
23. ♄ η ♊ diff. Lat. 5′.
25. ☾ θ ♒ 2ʰ 12′.
26. ♂ λ ♎ diff. Lat. 9′.
28. ☾ κ ♓ 20ʰ 56′.
29. ♀ γ ♎ diff. Lat. 56′.
31. ☾ η Pleiadum 5ʰ 37′.

DECEMBER 1767.

Days of the Month.	Days of the Week.	Sun's Longitude.	Sun's Right Aſc. in Time.	Sun's Declin. South.	Equat. of Time Sub.	Diff.
		s ° ′ ″	h ′ ″	° ′ ″	′ ″	″
1	Tu.	8. 9. 8. 48	16. 29. 47	21. 51. 3	10. 36	24
2	W.	8. 10. 9. 42	16. 34. 7	22. 0. 9	10. 12	23
3	Th.	8. 11. 10. 38	16. 38. 27	22. 8. 49	9. 49	25
4	F.	8. 12. 11. 35	16. 42. 48	22. 17. 3	9. 24	24
5	Sa.	8. 13. 12. 32	16. 47. 10	22. 24. 51	9. 0	26
6	Su.	8. 14. 13. 29	16. 51. 32	22. 32. 13	8. 34	25
7	M.	8. 15. 14. 28	16. 55. 54	22. 39. 9	8. 9	27
8	Tu.	8. 16. 15. 28	17. 0. 17	22. 45. 38	7. 42	27
9	W.	8. 17. 16. 29	17. 4. 41	22. 51. 40	7. 15	28
10	Th.	8. 18. 17. 30	17. 9. 4	22. 57. 15	6. 47	28
11	F.	8. 19. 18. 34	17. 13. 29	23. 2. 23	6. 19	28
12	Sa.	8. 20. 19. 38	17. 17. 53	23. 7. 3	5. 51	29
13	Su.	8. 21. 20. 43	17. 22. 19	23. 11. 16	5. 22	28
14	M.	8. 22. 21. 49	17. 26. 44	23. 15. 1	4. 54	29
15	Tu.	8. 23. 22. 56	17. 31. 10	23. 18. 19	4. 25	30
16	W.	8. 24. 24. 4	17. 35. 36	23. 21. 8	3. 55	29
17	Th.	8. 25. 25. 13	17. 40. 2	23. 23. 29	3. 26	30
18	F.	8. 26. 26. 22	17. 44. 29	23. 25. 22	2. 56	29
19	Sa.	8. 27. 27. 33	17. 48. 55	23. 26. 47	2. 27	30
20	Su.	8. 28. 28. 43	17. 53. 21	23. 27. 43	1. 57	31
21	M.	8. 29. 29. 55	17. 57. 49	23. 28. 12	1. 26	30
22	Tu.	9. 0. 31. 6	18. 2. 16	23. 28. 12	0. 56	30
23	W.	9. 1. 32. 18	18. 6. 42	23. 27. 43	0. 26	30
24	Th.	9. 2. 33. 20	18. 11. 9	23. 26. 46	Add 4	30
25	F.	9. 3. 34. 42	18. 15. 36	23. 25. 20	0. 34	30
26	Sa.	9. 4. 35. 53	18. 20. 3	23. 23. 27	1. 4	30
27	Su.	9. 5. 37. 5	18. 24. 29	23. 21. 5	1. 34	29
28	M.	9. 6. 38. 16	18. 28. 56	23. 18. 15	2. 3	30
29	Tu.	9. 7. 39. 27	18. 33. 21	23. 14. 57	2. 33	29
30	W.	9. 8. 40. 38	18. 37. 46	23. 11. 12	3. 2	29
31	Th.	9. 9. 41. 48	18. 42. 12	23. 6. 57	3. 31	

Days of the Month.	Semidiameter of the Sun.	Time of D° paſſing the Meridian.	Hourly Motion of the Sun.	Logarithm of the Sun's Diſtance.	Place of the Moon's Node.
	′ ″	′ ″	′ ″		s ° ′
1	16. 17, 1	1. 10, 2	2. 32, 2	9. 993587	9. 23. 47
7	16. 17, 9	1. 10, 6	2. 32, 5	9. 993237	9. 23. 28
13	16. 18, 5	1. 11, 0	2. 32, 7	9. 992979	9. 23. 9
19	16. 19, 0	1. 11, 1	2. 32, 8	9. 992805	9. 22. 50
25	16. 19, 2	1. 11, 1	2. 32, 9	9. 992684	9. 22. 31

Eclipſes of the SATELLITES of JUPITER.

I. Satellite. Immerſions.	
Days	h ′ ″
2	9. 4. 37
4	3. 32. 13
5	21. 59. 49
7	16*27. 22
9	10. 54. 55
11	5. 22. 20
12	23. 49. 53
14	18*17. 20
16	12. 44. 53
18	7. 12. 17
20	1. 39. 44
21	20. 7. 10
23	14. 34. 36
25	9. 2. 8
27	3. 29. 31
28	21. 57. 0
30	16*24. 27

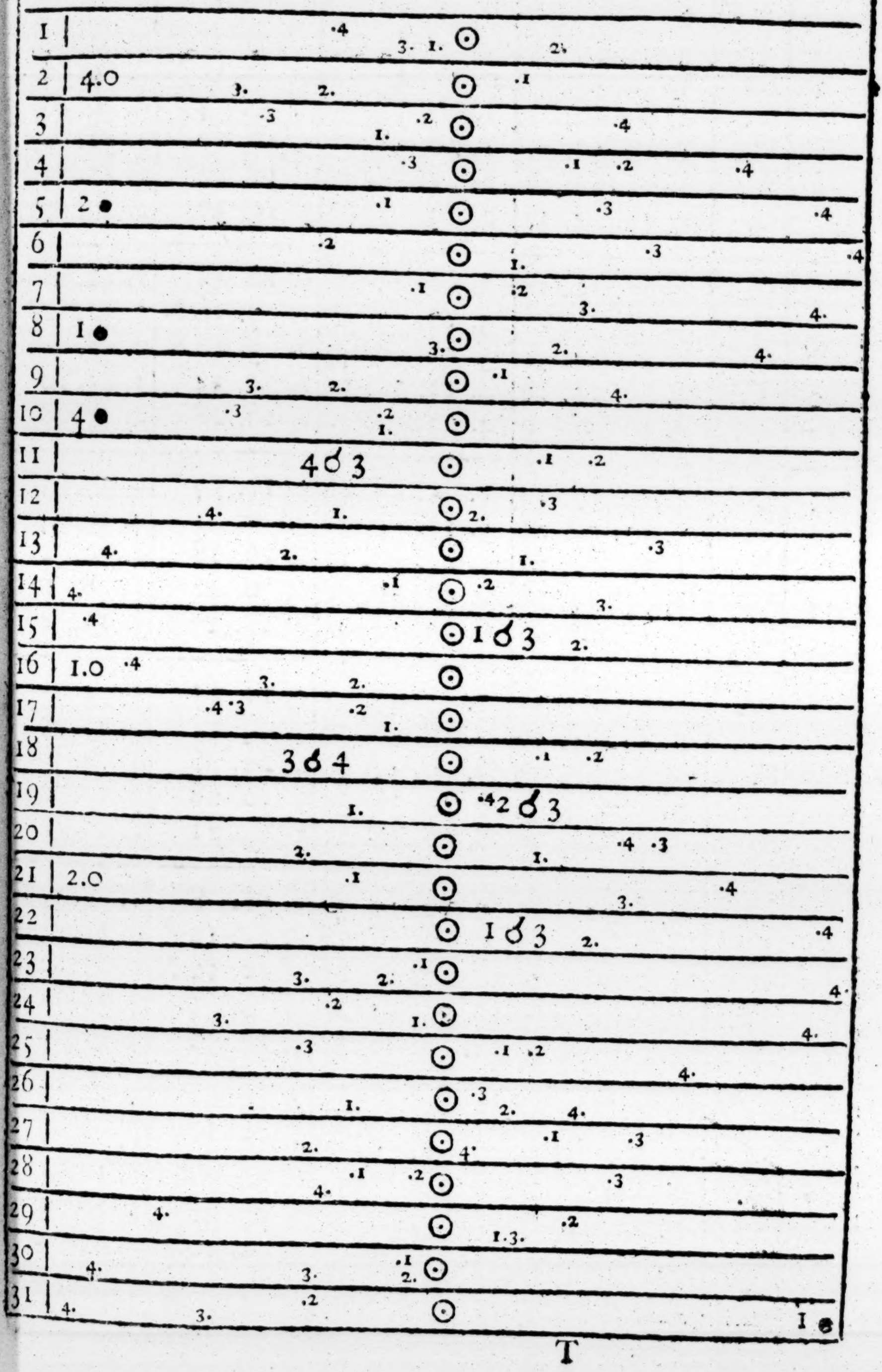
II. Satellite. Immerſions.	
Days	h ′ ″
1	2. 21. 39
4	15*37. 12
8	4. 52. 40
11	18* 7. 52
15	7. 23. 0
18	20. 38. 6
22	9. 53. 0
25	23. 7. 52
29	12. 22. 43

III. Satellite.	
Days	h ′ ″
7	10. 37. 41 I
7	13. 10. 59 E
14	14. 32. 4 I
14	17* 4. 16 E
21	18*26. 10 I
21	20. 57. 16 E
28	22. 20. 27 I
29	0. 50. 37 E

IV. Satellite.	
9	17*30. 6 I
9	18*45. 56 E
26	11. 25. 8 I
26	12. 21. 7 E

Days.	Heliocentric Longitude.	Heliocentric Latitude.	Geocentric Longitude.	Geocentric Latitude.	Declination.	Passage over Merid.
	s ° ′	° ′	s ° ′	° ′	° ′	h ′
MERCURY. inf. ☌ 11^{d}. 19^{h}.						
1	0. 15. 20	3. 33 S	8. 28. 2	1. 26 S	24. 53 S	1. 22
7	1. 19. 52	0. 30 N	8. 26. 1	0. 13 N	23. 12	0. 47
13	2. 27. 31	4. 40	8. 18. 33	2. 7	20. 52	23. 41
19	4. 3. 35	6. 50	8. 12. 35	2. 59	19. 22	22. 52
25	5. 4. 35	6. 37	8. 12. 33	2. 44	19. 38	22. 28
VENUS.						
1	3. 0. 25	0. 56 N	6. 29. 31	1. 38 N	9. 46 S	21. 20
7	3. 10. 8	1. 28	7. 2. 59	2. 20	10. 20	21. 10
13	3. 19. 52	1. 58	7. 7. 11	2. 53	11. 11	21. 1
19	3. 29. 36	2. 24	7. 12. 1	3. 14	12. 23	20. 53
25	4. 9. 21	2. 46	7. 17. 18	3. 26	13. 43	20. 48
MARS.						
1	6. 22. 52	0. 47 N	7. 10. 10	0. 32 N	14. 22 S	22. 0
7	6. 25. 42	0. 41	7. 14. 12	0. 29	15. 40	21. 49
13	6. 28. 33	0. 37	7. 18. 16	0. 26	16. 53	21. 38
19	7. 1. 26	0. 32	7. 22. 20	0. 22	18. 2	21. 28
25	7. 4. 20	0. 26	7. 26. 26	0. 18	19. 5	21. 18
JUPITER.						
1	6. 8. 22	1. 19 N	6. 16. 37	1. 11 N	5. 6 S	20. 30
7	6. 8. 49	1. 19	6. 17. 36	1. 12	5. 48	20. 8
13	6. 9. 17	1. 19	6. 18. 31	1. 13	6. 8	19. 45
19	6. 9. 44	1. 19	6. 19. 23	1. 14	6. 27	19. 21
25	6. 10. 12	1. 19	6. 20. 9	1. 15	6. 42	18. 57
SATURN. ☍ 21^{d} 19^{h}.						
1	2. 29. 32	0. 56 S	3. 1. 58	1. 2 S	22. 25 N	13. 37
7	2. 29. 45	0. 56	3. 1. 31	1. 2	22. 26	13. 9
13	2. 29. 59	0. 55	3. 1. 3	1. 1	22. 27	12. 41
19	3. 0. 12	0. 55	3. 0. 34	1. 1	22. 27	12. 12
25	3. 0. 26	0. 54	3. 0. 3	1. 0	22. 28	11. 43

Configurations of the SATELLITES of JUPITER at 6 o'th' Clock in the Morning.



DECEMBER 1767.

Days of the Month.	Days of the Week.	Moon's Longitude at Noon.	Moon's Longitude at Midnight.	Moon's Latitude at Noon.	Moon's Latitude at Midnight.
		S ° ′ ″	S ° ′ ″	° ′ ″	° ′ ″
1	Tu.	0. 14. 33. 50	0. 21. 48. 20	5. 6. 13 N	5. 9. 6 N
2	W.	0. 29. 3. 25	1. 6. 18. 26	5. 7. 4	5. 0. 6
3	Th.	1. 13. 32. 32	1. 20. 44. 58	4. 48. 20	4. 32. 2
4	F.	1. 27. 54. 52	2. 5. 1. 39	4. 11. 32	3. 47. 13
5	Sa.	2. 12. 4. 32	2. 19. 2. 58	3. 19. 36	2. 49. 17
6	Su.	2. 25. 56. 19	3. 2. 44. 24	2. 16. 45	1. 42. 42
7	M.	3. 9. 26. 56	3. 16. 3. 47	1. 7. 36 N	0. 32. 2 N
8	Tu.	3. 22. 34. 55	3. 29. 0. 43	0. 3. 28 S	0. 38. 29 S
9	W.	4. 5. 21. 18	4. 11. 36. 51	1. 12. 34	1. 45. 20
10	Th.	4. 17. 48. 0	4. 23. 55. 9	2. 16. 28	2. 45. 48
11	F.	4. 29. 58. 54	5. 5. 59. 49	3. 12. 57	3. 37. 43
12	Sa.	5. 11. 58. 29	5. 17. 55. 29	4. 0. 1	4. 19. 34
13	Su.	5. 23. 51. 32	5. 29. 47. 17	4. 36. 18	4. 50. 2
14	M.	6. 5. 43. 18	6. 11. 46. 6	5. 0. 42	5. 8. 9
15	Tu.	6. 17. 38. 26	6. 23. 38. 45	5. 12. 17	5. 13. 4
16	W.	6. 29. 41. 31	7. 5. 47. 2	5. 10. 21	5. 4. 10
17	Th.	7. 11. 55. 56	7. 18. 8. 28	4. 54. 22	4. 41. 5
18	F.	7. 24. 24. 49	8. 0. 45. 17	4. 24. 16	4. 4. 0
19	Sa.	8. 7. 9. 52	8. 13. 38. 35	3. 40. 28	3. 13. 52
20	Su.	8. 20. 11. 27	8. 26. 48. 22	2. 44. 21	2. 12. 21
21	M.	9. 3. 29. 7	9. 10. 13. 31	1. 38. 8	1. 2. 15 S
22	Tu.	9. 17. 1. 22	9. 23. 52. 18	0. 25. 12 S	0. 12. 29 N
23	W.	10. 0. 46. 10	10. 7. 42. 23	0. 50. 16 N	1. 27. 42
24	Th.	10. 14. 40. 54	10. 21. 41. 16	2. 4. 1	2. 38. 33
25	F.	10. 28. 43. 19	11. 5. 46. 30	3. 10. 52	3. 40. 22
26	Sa.	11. 12. 50. 44	11. 19. 55. 44	4. 6. 37	4. 29. 9
27	Su.	11. 27. 1. 15	0. 4. 6. 57	4. 47. 33	5. 1. 36
28	M.	0. 11. 12. 33	0. 18. 17. 55	5. 10. 58	5. 15. 42
29	Tu.	0. 25. 22. 40	1. 2. 26. 35	5. 15. 36	5. 10. 43
30	W.	1. 9. 29. 18	1. 16. 30. 27	5. 1. 10	4. 47. 4
31	Th.	1. 23. 29. 45	2. 0. 27. 2	4. 28. 51	4. 6. 40

DECEMBER 1767.

Days of the Month.	Days of the Week.	☽'s Age.	☽'s Passage over Merid.	☽'s Right Ascen. at Noon.	☽'s Right Asc. at Midn.	☽'s Declination at Noon.	☽'s Declination at Midn.
			h ′	° ′	° ′	° ′	° ′
1	Tu.	11	8. 34	11. 24	18. 11	10. 27 N	13. 17 N
2	W.	12	9. 27	25. 7	32. 14	15. 56	18. 21
3	Th.	13	10. 23	39. 32	47. 1	20. 30	22. 20
4	F.	14	11. 22	54. 38	62. 20	23. 49	24. 53
5	Sa.	15	12. 22	70. 5	77. 50	25. 34	25. 50
6	Su.	16	13. 20	85. 30	93. 1	25. 41	25. 9
7	M.	17	14. 16	100. 22	107. 30	24. 15	23. 2
8	Tu.	18	15. 6	114. 23	121. 1	21. 31	19. 45
9	W.	19	15. 53	127. 25	133. 34	17. 47	15. 38
10	Th.	20	16. 37	139. 32	145. 19	13. 21	10. 57
11	F.	21	17. 17	150. 56	156. 26	8. 29	5. 57
12	Sa.	22	17. 57	161. 51	167. 12	3. 23 N	0. 48 N
13	Su.	23	18. 38	172. 32	177. 53	1. 47 S	4. 21 S
14	M.	24	19. 18	183. 15	188. 42	6. 52	9. 21
15	Tu.	25	19. 59	194. 14	199. 54	11. 44	14. 2
16	W.	26	20. 45	205. 43	211. 42	16. 13	18. 14
17	Th.	27	21. 33	217. 53	224. 16	20. 5	21. 45
18	F.	28	22. 26	230. 53	237. 41	23. 10	24. 19
19	Sa.	29	23. 21	244. 40	251. 49	25. 9	25. 40
20	Su.	1	☌	259. 6	266. 28	25. 50	25. 38
21	M.	2	0. 18	273. 51	281. 13	25. 3	24. 5
22	Tu.	3	1. 14	288. 31	295. 43	22. 48	21. 9
23	W.	4	2. 9	302. 48	309. 44	19. 12	16. 57
24	Th.	5	3. 1	316. 32	323. 12	14. 28	11. 48
25	F.	6	3. 51	329 46	336. 13	8. 58	5. 59 S
26	Sa.	7	4. 40	342. 36	348. 59	2. 57 S	0. 8 N
27	Su.	8	5. 27	355. 22	1. 46	3. 12 N	6. 13
28	M.	9	6. 16	8. 15	14. 50	9. 12	12. 3
29	Tu.	10	7. 8	21. 32	28. 23	14. 43	17. 12
30	W.	11	8. 2	35. 24	42. 34	19. 25	21. 22
31	Th.	12	8. 57	49. 53	57. 22	23. 0	24. 17

DECEMBER 1767.

Days of the Month.	Days of the Week.	Semid^{r}. ☽ at Noon.	Semid^{r}. ☽ at Midnight.	Hor. Par. ☽ at Noon.	Hor. Par. ☽ at Midnight.	Logiſtic Logar. at Noon.	Logiſtic Logar. at Midn.
		′ ″	′ ″	′ ″	′ ″		
1	Tu.	16. 19	16. 20	59. 54	59. 56	0007	0005
2	W.	16. 20	16. 19	59. 55	59. 51	0006	0011
3	Th.	16. 17	16. 14	59. 46	59. 36	0017	0029
4	F.	16. 11	16. 8	59. 25	59. 11	0042	0059
5	Sa.	16. 3	15. 58	58. 54	58. 37	0080	0101
6	Su.	15. 53	15. 47	58. 17	57. 55	0126	0153
7	M.	15. 41	15. 35	57. 33	57. 11	0181	0209
8	Tu.	15. 29	15. 23	56. 48	56. 26	0238	0266
9	W.	15. 17	15. 12	56. 5	55. 46	0293	0318
10	Th.	15. 7	15. 2	55. 28	55. 12	0341	0362
11	F.	14. 59	14. 55	54. 58	54. 46	0381	0396
12	Sa.	14. 53	14. 51	54. 36	54. 30	0410	0418
13	Su.	14. 50	14. 49	54. 26	54. 24	0423	0426
14	M.	14. 50	14. 51	54. 25	54. 29	0424	0419
15	Tu.	14. 52	14. 55	54. 35	54. 43	0411	0400
16	W.	14. 57	15. 1	54. 53	55. 6	0387	0370
17	Th.	15. 5	15. 9	55. 21	55. 36	0350	0331
18	F.	15. 14	15. 18	55. 53	56. 11	0309	0285
19	Sa.	15. 23	15. 29	56. 29	56. 48	0262	0238
20	Su.	15. 34	15. 39	57. 7	57. 25	0214	0191
21	M.	15. 44	15. 48	57. 43	58. 0	0169	0147
22	Tu.	15. 52	15. 56	58. 15	58. 29	0129	0111
23	W.	16. 0	16. 3	58. 42	58. 53	0095	0082
24	Th.	16. 5	16. 7	59. 2	59. 10	0071	0061
25	F.	16. 9	16. 10	59. 16	59. 21	0053	0047
26	Sa.	16. 11	16. 12	59. 24	59. 26	0044	0041
27	Su.	16. 12	16. 12	59. 27	59. 26	0040	0041
28	M.	16. 11	16. 11	59. 25	59. 22	0042	0046
29	Tu.	16. 10	16. 8	59. 19	59. 13	0050	0057
30	W.	16. 6	16. 4	59. 6	58. 59	0066	0074
31	Th.	16. 2	15. 59	58. 50	58. 40	0085	0098

DECEMBER 1767.

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Aldebaran.	52. 59. 10	51. 13. 19	49. 27. 30	47. 41. 44
2		38. 55. 3	37. 10. 22	35. 26. 1	33. 42. 2
3	Pollux.	66. 7. 54	64. 20. 43	62. 33. 41	60. 46. 48
4		51. 54. 56	50. 9. 9	48. 23. 37	46. 38. 21
5	Regulus.	74. 32. 6	72. 47. 8	71. 2. 28	69. 18. 4
6		60. 40. 40	58. 58. 7	57. 15. 54	55. 34. 0
7		47. 9. 41	45. 29. 54	43. 50. 30	42. 11. 28
8		34. 1. 59	32. 25. 12	30. 48. 49	29. 12. 50
9		21. 19. 14	19. 45. 57	18. 13. 13	16. 41. 3
10	Spica ♍	62. 45. 28	61. 13. 15	59. 41. 19	58. 9. 40
11		50. 34. 53	49. 4. 34	47. 34. 27	46. 4. 31
12		38. 37. 30	37. 8. 34	35. 39. 46	34. 11. 6
10	The Sun.	120. 27. 54	119. 3. 19	117. 38. 59	116. 14. 54
11		109. 17. 46	107. 54. 57	106. 32. 19	105. 9. 52
12		98. 19. 56	96. 58. 21	95. 36. 52	94. 15. 29
13		87. 29. 40	86. 8. 39	84. 47. 39	83. 26. 40
14		76. 41. 40	75. 20. 35	73. 59. 57	72. 38. 15
15		65. 50. 53	64. 29. 5	63. 7. 9	61. 45. 5
16		54. 52. 27	53. 29. 25	52. 6. 13	50. 42. 49
17		43. 42. 31	42. 17. 45	40. 52. 44	
23	α Pegaſi.	51. 52. 9	50. 13. 46	48. 35. 33	46. 57. 31
24		38. 52. 6	37. 16. 29	35. 41. 34	34. 7. 25
25	α Arietis.	65. 31. 49	63. 46. 28	62. 1. 6	60. 15. 42
26		51. 28. 28	49. 43. 0	47. 57. 34	46. 12. 10
27	Aldebaran.	70. 11. 45	68. 27. 12	66. 42. 42	64. 58. 16
28		56. 17. 12	54. 33. 15	52. 49. 27	51. 5. 46
29		42. 29. 57	40. 47. 26	39. 5. 12	37. 23. 16
30		28. 59. 59	27. 21. 9	25. 43. 10	24. 6. 8
31	Pollux.	56. 16. 50	54. 33. 28	52. 50. 16	51. 7. 14

Diſtances of ☽'s Center from Stars, and from ☉ eaſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	Aldebaran	45. 56. 3	44. 10. 31	42. 25. 11	40. 40. 1
2		31. 58. 29	30. 15. 30	28. 33. 10	26. 51. 35
3	Pollux.	59. 0. 3	57. 13. 29	55. 27. 6	53. 40. 55
4		44. 53. 21	43. 8. 39	41. 24. 17	39. 40. 15
5	Regulus.	67. 33. 59	65. 50. 12	64. 6. 43	62. 23. 32
6		53. 52. 26	52. 11. 13	50. 30. 21	48. 49. 50
7		40. 32. 48	38. 54. 31	37. 16. 38	35. 39. 7
8		27. 37. 15	26. 2. 4	24. 27. 19	22. 53. 2
9	Spica ♍	68. 57. 1	67. 23. 41	65. 50. 40	64. 17. 56
10		56. 38. 16	55. 7. 5	53. 36. 8	52. 5. 24
11		44. 34. 47	43. 5. 13	41. 35. 49	40. 6. 35
12		32. 42. 33	31. 14. 7	29. 45. 48	28. 17. 34
10	The Sun.	114. 51. 2	113. 27. 24	112. 3. 59	110. 40. 46
11		103. 47. 35	102. 25. 28	101. 3. 29	99. 41. 39
12		92. 54. 12	91. 32. 59	90. 11. 49	88. 50. 43
13		82. 5. 42	80. 44. 44	79. 23. 44	78. 2. 43
14		71. 16. 58	69. 55. 36	68. 34. 8	67. 42. 33
15		60. 22. 53	59. 0. 32	57. 38. 1	56. 15. 19
16		49. 19. 13	47. 55. 24	46. 31. 21	45. 7. 3
22	α Pegaſi.	58. 26. 42	56. 47. 59	55. 9. 18	53. 30. 41
23		45. 19. 43	43. 42. 13	42. 5. 4	40. 28. 20
24	α Arietis.	72. 32. 50	70. 47. 37	69. 2. 23	67. 17. 7
25		58. 30. 17	56. 44. 50	54. 59. 23	53. 13. 56
26		44. 26. 47	42. 41. 27	40. 56. 11	39. 10. 57
27	Aldebaran	63. 13. 53	61. 29. 35	59. 45. 22	58. 1. 14
28		49. 22. 14	47. 38. 53	45. 55. 42	44. 12. 43
29		35. 41. 40	34. 0. 28	32. 19. 45	30. 39. 33
30	Pollux.	63. 11. 33	61. 27. 43	59. 43. 58	58. 0. 20
31		49. 24. 22	47. 41. 43	45. 59. 17	44. 17. 4

DECEMBER 1767.

Diſtances of ☽'s Center from Stars, and from ☉ weſt of her.

Days.	Stars Names.	Noon.	3 Hours.	6 Hours.	9 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	α Pegaſi.	27. 39. 29	29. 10. 18	30. 42. 42	32. 16. 34
2		40. 22. 41	42. 2. 18	43. 42. 30	45. 23. 10
3		53. 51. 40	55. 34. 4	57. 16. 36	58. 59. 14
4	α Arietis.	23. 59. 55	25. 44. 37	27. 29. 22	29. 14. 6
5		37. 56. 54	39. 41. 3	41. 25. 0	43. 8. 45
6	Aldebaran	20. 51. 26	22. 24. 19	23. 58. 2	25. 32. 26
7		33. 30. 26	35. 6. 28	36. 42. 29	38. 18. 27
8		46. 16. 11	47. 51. 12	49. 25. 59	51. 0. 33
9		58. 49. 46	60. 22. 48	61. 55. 35	63. 28. 7
10	Pollux.	27. 9. 49	30. 37. 49	32. 7. 46	33. 37. 38
11		41. 5. 32	42. 34. 47	44. 3. 55	45. 32. 57
12	Regulus.	15. 59. 8	17. 26. 35	18. 54. 7	20. 21. 46
13		27. 41. 11	29. 9. 13	30. 37. 17	32. 5. 24
14		39. 26. 36	40. 55. 1	42. 23. 30	43. 52. 4
15		51. 16. 28	52. 45. 44	54. 15. 8	55. 44. 40
16		63. 14. 43	64. 45. 16	66. 16. 0	67. 46. 56
17	Spica ♍	21. 28. 31	23. 0. 0	24. 31. 52	26. 4. 4
18		33. 49. 52	35. 23. 59	36. 58. 25	38. 33. 9
24	The Sun.	42. 9. 52	43. 47. 20	45. 24. 55	47. 2. 36
25		55. 12. 18	56. 50. 25	58. 28. 34	60. 6. 46
26		68. 18. 22	69. 56. 47	71. 35. 12	73. 13. 39
27		81. 25. 59	83. 4. 27	84. 42. 54	86. 21. 20
28		94. 33. 10	96. 11. 28	97. 49. 45	99. 27. 59
29		107. 38. 36	109. 16. 35	110. 54. 31	112. 32. 24
28	α Aquilæ.	72. 24. 7	73. 55. 55	75. 27. 54	77. 0. 4
29	α Pegaſi.	36. 59. 42	38. 35. 38	40. 12. 11	41. 49. 16
30		50. 0. 44	51. 39. 54	53. 19. 15	54. 58. 46
31		63. 17. 49	64. 57. 50	66. 37. 51	68. 17. 51

Diſtances of ☽'s Center from Stars, and from ☉ weſt of her.

Days.	Stars Names.	12 Hours.	15 Hours.	18 Hours.	21 Hours.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″
1	α Pegaſi.	33. 51. 45	35. 28. 6	37. 5. 29	38. 43. 42
2		47. 4. 15	48. 45. 42	50. 27. 27	52. 9. 27
3		60. 41. 57	62. 24. 42	64. 7. 28	65. 50. 12
4	α Arietis.	30. 58. 50	32. 43. 31	34. 28. 6	36. 12. 34
5		44. 52. 17	46. 35. 34	48. 18. 36	50. 1. 20
6	Aldebaran.	27. 7. 23	28. 42. 46	30. 18. 28	31. 54. 24
7		39. 54. 19	41. 30. 2	43. 5. 35	44. 40. 58
8		52. 34. 54	54. 9. 0	55. 42. 51	57. 16. 26
9		65. 0. 23	66. 32. 25	68. 4. 12	69. 35. 44
10	Pollux.	35. 7. 24	36. 37. 5	38. 6. 40	39. 36. 9
11		47. 1. 52	48. 30. 39	49. 59. 21	51. 27. 58
12	Regulus.	21. 49. 30	23. 17. 20	24. 45. 14	26. 13. 11
13		33. 33. 33	35. 1. 44	36. 29. 58	37. 58. 15
14		45. 20. 43	46. 49. 29	48. 18. 22	49. 47. 21
15		57. 14. 20	58. 44. 10	60. 14. 11	61. 44. 21
16	Spica ♍	15. 26. 44	16. 56. 32	18. 26. 47	19. 57. 27
17		27. 36. 36	29. 9. 26	30. 42. 35	32. 16. 4
18		40. 8. 12	41. 43. 33	43. 19. 11	44. 55. 7
24	The Sun.	48. 40. 23	50. 18. 15	51. 56. 12	53. 34. 13
25		61. 45. 1	63. 23. 18	65. 1. 38	66. 39. 59
26		74. 52. 6	76. 30. 34	78. 9. 2	79. 47. 31
27		87. 59. 45	89. 38. 8	91. 16. 30	92. 54. 51
28		101. 6. 12	102. 44. 22	104. 22. 29	106. 0. 34
29		114. 10. 13	115. 47. 58	117. 25. 39	119. 3. 16
27	α Aquilæ.	66. 19. 38	67. 50. 18	69. 21. 17	70. 52. 34
28		78. 32. 24	80. 4. 51	81. 37. 24	83. 10. 1
29	α Pegaſi.	43. 26. 49	45. 4. 48	46. 43. 9	48. 21. 48
30		56. 38. 24	58. 18. 8	59. 57. 57	61. 37. 51
31		69. 57. 51	71. 37. 47	73. 17. 39	74. 57. 25

EXPLANATION and USE

OF THE

ARTICLES

Contained in the

ASTRONOMICAL and NAUTICAL EPHEMERIS.

IT may be proper firſt to premiſe, that all the Calculations are made according to apparent Time by the Meridian of the Royal Obſervatory at Greenwich. They are likewiſe adapted to apparent Noon, except where they are otherwiſe diſtinguiſhed, as the Eclipſes and Configurations of Jupiter's Satellites, the Moon's Places, *&c*, computed for Midnight, and the Diſtances of the Moon from the Sun and Stars for every third Hour; which are all computed to the apparent Times ſet down.

Apparent Time is that deduced immediately from the Sun, whether from the Obſervation of his paſſing the Meridian, from his Altitude obſerved at a Diſtance from the Meridian, or from his obſerved Riſing or Setting. This Time is different from that ſhewn by Clocks and Watches well regulated at Land, which is called equated or mean Time. This will be explained when we come to treat of the Equation of Time.

The Day is here ſuppoſed, according to the Method of Aſtronomers, to begin at Noon, or 12 Hours later than the civil Day of the ſame Denomination, and to be counted up to 24 Hours, or the ſucceeding Noon, when the next Day begins. Thus the Day of the Month and the Hour of the Day are the ſame in this Method as in the civil Account at Noon, and from Noon till Midnight; but from Midnight till Noon they differ; for whereas in the civil Account a freſh Day is ſuppoſed to begin at Midnight, and the Hours to begin over again, in this Method the Day is ſtill continued beyond Midnight, and the Reckoning of the Hours is continued up to 24. Thus the Diſtances put down to January 10, 15 Hours, belong to January 11 at Three in the Morning by civil Reckoning.

There are 12 Pages for every Month. The firſt Column of the firſt Page of each Month contains the Day of the Month; the Second, the Day of the Week expreſſed conciſely by the initial Letter or Letters, *Su.* ſtanding for Sunday, M. for Monday, Tu. for Tueſday, W. for Wedneſday, Th. for Thurſday, F. for Friday, and Sa. for Saturday: The third Column exhibits the Sundays and Feſtivals of the Church of England, and other remarkable Days: The laſt Column ſhews at Top the Moon's Phaſes, or the Times of new and full Moon, and of the firſt and laſt Quarter, or two Quadratures with the Sun: Beneath are contained miſcellaneous Phænomena, namely, Eclipſes of the Sun and Moon, and Occultations of Planets or fixed Stars not leſs than the fourth Magnitude, by the Moon, as they ſhould happen at Greenwich by the Tables; the Conjunctions of the Moon with all Stars not leſs than the fourth Magnitude, which can be Occultations any where on the Globe, between the Latitudes of 60°. North and 40°. South: The Conjunctions, Oppoſitions and Quadratures of the ſuperior Planets with the Sun; and the Conjunctions and greateſt Elongations of the inferior Planets from the Sun, the Entrance of the Sun into the ſeveral Signs, and any other remarkable Phænomena.

The Stars are expreſſed by Bayer's Characters of Reference. The Conjunction of the Moon or a Planet with a Star, is denoted by prefixing the Character of the Moon or Planet to that of the Star, the Time of the Conjunction being placed immediately after. The Caſe is the ſame with Reſpect to the Occultation of a Star or Planet by the Moon, only this is further diſtinguiſhed by the Addition of Im. or Immerſion, to ſignify the Diſappearance behind the Moon; and Em. or Emerſion, to ſignify the Re-appearance of the ſame. Thus 8^{d} ☽ δ ♑ $16^{h}.\ 22'$. ſignifies that the Moon will be in Conjunction with the Star δ ♑ on the Eighth Day at $16^{h}.\ 22'$. excluſive of Parallax: And 10^{d}. ☽ ε ♊ Imm. $9^{h}\ 14'$. Em. $10^{h}.\ 23'$ ſignifies that the Moon will eclipſe ε ♊ on the 10th Day, the Immerſion being at $9^{h}\ 14'$. and at $10^{h}.\ 23'$. apparent Time at Greenwich.

The

The Occultations ſet down are thoſe only viſible at Greenwich; and the Circumſtances will not differ very widely in moſt Parts of the Kingdom; but in very diſtant Places they will differ very much, owing to the Change of the Moon's Parallax, or it may become no Occultation at all: The like may be ſaid of Eclipſes of the Sun.

Eclipſes of the Sun, and Occultations of fixed Stars by the Moon, if obſerved in Places whoſe Latitude and Longitude are well determined, may be applied to the Correction of the lunar Tables; but if made in Places whoſe Latitude only is well known, may be applied to the Determination of the Longitude of the Place; but for this Purpoſe an accurate Calculation muſt be made of the Moon's Parallaxes in Longitude and Latitude, which makes this Method of ſettling the Longitudes of Places, though a very accurate one, leſs convenient in Uſe for Perſons not much verſed in aſtronomical Calculations. However, this ought not to diſcourage Travellers or Mariners from endeavouring to make theſe Obſervations as often and as carefully as poſſible, when they ſhall happen to be at any Place whoſe Longitude they have Reaſon to think has not been at all or but indifferently determined; ſince the neceſſary Calculations may be made at any Time afterwards by themſelves, at leiſure, or referred to the Skill of Aſtronomers and Mathematicians.

Eclipſes of the Moon are not liable to this Inconvenience; the Longitude of any Place, where an Eclipſe has been obſerved, being deduced immediately by taking the Difference of the Time of the Obſervation and that ſet down in the Ephemeris, and converting it into Degrees, at the Rate of 15 to One Hour, &c. or more briefly by Table Pages 6. 7, 8. of the Tables requiſite to be uſed with the Ephemeris. But as the Beginning or Ending of an Eclipſe of the Moon cannot be generally obſerved nearer than One Minute, and ſometimes Two or Three Minutes of Time, the Longitudes of Places cannot be certainly determined by this Method from a ſingle Obſervation of the Beginning or End nearer than a Degree. It is unneceſſary to mention that even this Point of Exactneſs will often be of great Service. If both the Beginning and End of the Eclipſe be obſerved, a conſiderably greater Degree of Exactneſs will be attained.

The Conjunctions of the Moon with the Planets, or fixed Stars not leſs than the fourth Magnitude, which may prove Occultations in ſome inhabited Parts of the Globe, are evidently deſigned to inſtruct Mariners or Travellers to look out frequently for ſuch Obſervations; which if they happen to prove Occultations, and are carefully obſerved, will afford a certain Means of determining the Longitude of the Place of Obſervation.

The Days of the Oppoſitions, Quadratures, &c. of the Planets with Reſpect to the Sun, are Times at which they ought to be obſerved in fixed Obſervatories, for ſettling the Elements of their Orbits by a Series of ſeveral Years Obſervations.

The Two firſt Columns of the Second Page of the Month contain the Day of the Month and Week as before; next follow the Sun's Longitude, right Aſcenſion in Time, Declination, and the Equation of Time, with the Difference from Day to Day.

The Longitude of the Sun is made uſe of in moſt of the ſucceeding Calculations of the Ephemeris, and may ſerve either to verify them, or to make other ſimilar Calculations at a different Time of the Day. Particularly it may ſerve with the Help of the Moon's Longitude, to find the Diſtance of the Moon from the Sun at any Time, independent of the Diſtances contained in the Four laſt Pages of the Month. To find the Sun's Longitude at any Time different from Noon, Proportion muſt be made according to its daily Increaſe: Saying as 24^h. is to the Hour from Noon reckoned by the Meridian of Greenwich, ſo is the daily Variation of the Sun's Longitude, to a fourth Number; which added to the Sun's Longitude at the preceding Noon, gives the true Longitude at the given Time.

If the Time given be that of a Meridian different from Greenwich, it muſt be firſt reduced thereto, by adding or ſubſtracting the Difference of Longitude turned into Time (at the Rate of One Hour to 15°, and One Minute of Time to 15 Minutes, or more briefly by Pages 6, 7, and 8, of the requiſite Tables) according as the Place is to the Weſt or to the Eaſt of Greenwich. Example: Suppoſe any one ſhould want to know the Sun's Longitude, January 19, 1767, at 4^h. 35′. being in 21° 15′. Longitude Eaſt of Greenwich. The Difference of Longitude turned into Time by Table Page 6, is 1^h. 25′ which ſubſtracted from 4^h. 35′. becauſe the Place is Eaſt of Greenwich, leaves 3^h. 10′. for the Time reduced to the Meridian of Greenwich. The Sun's Longitude the preceding Noon is, 9^s. 29°. 18′. 2″. and the following Noon is, 10^s. 0°. 19′. 4″. the Difference is, 1°. 1′. 2″. or 61′.2″. the daily Variation. Then ſay, as 24^h. is to 3^h. 10′. ſo is 61′ 2″ to 8′. 3″. which added to 9^s. 29°. 18′. 2″. the Sun's Longitude on the

preceding

preceding Noon, gives $9^s. 29^\circ. 26'. 5''$ the Sun's Longitude at the Time given. In like Manner any other of the following Articles is to be found by the Help of the Ephemeris.

The Sun's Longitude ſerves alſo to compute the Aberration of the fixed Stars and Planets.

The Sun's right Aſcenſion in Time is uſeful to the practical Aſtronomer in regular Obſervatories, who adjuſts his Clocks by ſidereal Time. It is alſo uſeful to him for converting apparent into ſidereal Time; as ſuppoſe that of an Eclipſe of Jupiter's Satellites, in order to know at what Time it may be expected to happen by his Clocks: For this Purpoſe, the Sun's right Aſcenſion at the preceding Noon, together with the Increaſe of right Aſcenſion from Noon, muſt be added to the apparent Time of the Phænomenon ſet down in the Ephemeris.

The Sun's right Aſcenſion in Time ſerves alſo to compute the apparent Time of a known Star's paſſing the Meridian: Thus ſubſtract the Sun's right Aſcenſion in Time at Noon from the Star's right Aſcenſion in Time, the Remainder is the apparent Time of the Star's paſſing the Meridian nearly; from which the proportional Part of the daily Increaſe of the Sun's right Aſcenſion for this apparent Time from Noon being ſubſtracted, leaves the correct Time of the Star's paſſing the Meridian.

Hence the apparent Time may be found from an obſerved Altitude of a known fixed Star, ſuppoſe one contained Page 12 or 13 of the requiſite Tables; as will be explained hereafter.

The Sun's right Aſcenſion in Time is alſo uſeful for computing the Time of the Moon and Planets paſſing the Meridian, as will be ſhewn under their proper Articles.

The Sun's Declination is neceſſary to find the Latitude, whether at Sea or Land, from the Meridian Altitude obſerved; it is alſo requiſite for finding the Latitude from Two Altitudes obſerved with the Interval of Time meaſured by a Watch; it ſerves for computing the Sun's Azimuth, having his Altitude and the Latitude of the Place given, in order to find the Variation of the Compaſs; it is required jointly with the Latitude of the Place and the Sun's horary Angle to compute his Altitude, if neglected to be obſerved at the Time of taking the Moon's Diſtance from the Sun for finding the Longitude, being uſeful to facilitate the Calculation of the Effect of Refraction and Parallax upon the Diſtance; it is alſo neceſſary to calculate the apparent Time from an obſerved Altitude of the Sun at a Diſtance from the Meridian, the Latitude being given; or to compute the Time of the Sun's Setting or Riſing; which, though a leſs accurate Method than the former of obtaining the Time, may yet be uſeful when that cannot be had. For any of theſe Purpoſes, the Sun's Declination muſt be found to the Time given nearly reduced to the Meridian of Greenwich, making Proportion according to the daily Increaſe or Decreaſe, in like Manner as was ſhewn with Reſpect to the Sun's Longitude.

The Equation of Time is a Correction, which added to or ſubſtracted from the apparent Time (according to its Title at the Top of the Column) gives equated or mean Time, or that which ſhould be ſhewn by a good Clock or Watch. Apparent Time is that which takes its Beginning from the Paſſage of the Sun's Centre over the Meridian of any Place; and had the Sun no Motion in the Ecliptic, or was his Motion reduced to the Equator or in right Aſcenſion uniform, he would always return to the Meridian after equal Intervals of Time. But his apparent Motion in the Ecliptic being continually varying, and his Motion in right Aſcenſion being rendered further unequal on Account of the Obliquity of the Ecliptic to the Equator, from theſe Cauſes it ariſes that the Intervals of his Return to the Meridian become unequal, and the Sun will gradually come too ſlow or too ſoon to the Meridian for an equable Motion, ſuch as that of Clocks and Watches ought to be.

This Retardation or Acceleration of the Sun's coming to the Meridian is called the Equation of Time, and is contained in the laſt Column but One of Page 2d; and when applied according to its Title to the Apparent Time, or that deduced immediately from the Sun, gives the mean or equated Time, whence the Error of a Clock or Watch may be found, and, if required, it may be corrected.

If it is propoſed to convert mean Time into apparent, this is done by a contrary Proceſs, by applying the Equation of Time to the mean Time given, with its Title or Sign changed; *viz.* ſubſtracting inſtead of adding, and adding inſtead of ſubſtracting.

The Equation of Time being ſet down in the Ephemeris for the Noon at Greenwich, Proportion muſt be made according to the daily Difference, to find what it ſhould be at any given Time reduced to the ſame Meridian, as in the preceding Articles. The laſt Column of this Page, containing the daily Differences of the Equation, is deſigned for this Purpoſe.

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As often at it may be required to make any Calculations from aſtronomical Tables, and the Time given be apparent Time; it is neceſſary firſt to apply the Equation of Time thereto to convert it into mean Time, the Tables being diſpoſed according to mean Motions. Thus the Articles contained in the Ephemeris anſwering to Noon were computed to 0^h. increaſed, or 24 Hours diminiſhed, by the Equation of Time: And the Moon's Places ſet down for Midnight were computed to 12^h. increaſed or diminiſhed by the Equation of Time.

What has been ſhewn concerning the Equation of Time chiefly reſpects the Aſtronomer, the Mariner having little to do with it in computing his Longitude from the Moon's Diſtances from the Sun and Stars obſerved at Sea with the Help of the Ephemeris, all the Calculations thereof being adapted to apparent Time, the ſame which he will obtain by the Altitudes of the Sun or Stars in the Manner hereafter preſcribed.

But if Watches made upon Mr. John Harriſon's or other equivalent Principles ſhould be brought into Uſe at Sea, the apparent Time deduced from an Altitude of the Sun muſt be corrected by the Equation of Time, and the mean Time found compared with that ſhewn by the Watch, the Difference will be the Longitude in Time from the Meridian by which the Watch was ſet; as near as the Going of the Watch can be depended upon.

The Equation of Time was computed for the Ephemeris of 1767 from the Table, Page 3d of Mayer's Tables; but on Account of that Table being made only to the neareſt Second without Decimals, and the Neglect of the ſmall Equations of the Sun, the Calculations of that Article in the Year 1767, cannot always be depended upon nearer than Two Seconds. For the Year 1768 and the following Years it will be computed in the ſtrict Manner explained in my Remarks upon that Subject, in the Philoſ. Tranſact. Vol. liv. P. 342 for the Year 1764; namely, by taking the Difference of the Sun's true right Aſcenſion, and his mean Longitude corrected by the Equation of the Equinoxes in right Aſcenſion, and turning it into Time at the Rate of 1′. to 15′. *&c.* The Equation of Time will be additive or ſubſtractive as the Sun's true right Aſcenſion is greater or leſs than his mean Longitude.

The Semidiameter of the Sun, Page 3d, is neceſſary to reduce the obſerved Altitude of his upper or lower Limb to that

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of the Centre; alſo to reduce the obſerved Diſtance of the Moon's neareſt Limb from the Sun's neareſt Limb to the Diſtance of the Centres. It is alſo uſeful to Aſtronomers to verify or aſcertain the Exactneſs of the Scale of their Micrometers, by Compariſon with the Meaſure of the Sun's horizontal Diameter. This Practice is particularly uſeful in ſolar Eclipſes, when the Diſtance of the Cuſps or the Verſe Sine of the uneclipſed Part has been meaſured with the Micrometer. The Semidiameters of the Sun in Mayer's Tables, on which all the Calculations reſpecting the Sun and Moon are made, ſuppoſe the Semidiameter at the mean Diſtance to be 16′. 2″, 8. which Mr. Mayer ſays he deduced from above 130 Obſervations taken with his Six Foot mural Quadrant, which ſeemed to him not ill adapted to the Purpoſe. It may not be amiſs to take this Opportunity to remark that the Quadrant here mentioned was given to the Univerſity of Gottingen by his late Majeſty, and was made by Mr. John Bird after the Model of the Eight Foot mural Arch, which he finiſhed for the Royal Obſervatory at Greenwich, and put up there in the Year 1750. Mr. Mayer made his Obſervations with his Six Foot mural Arch, from the Year 1756, to the Time of his Deceaſe; with it he ſettled the mean Obliquity of the Ecliptic to the Beginning of the Year 1756, at 23°. 28′. 16″. which Dr. Bradley ſettled by his Obſervations made in the Years 1750 and 1751, at 23°. 28′. 18″: The Difference is agreeable to what ought to ariſe from the gradual Diminution of the Obliquity of the Ecliptic at the Rate of about ½ a Second in a Year. The ſame Inſtrument he alſo uſed in ſettling the Elements of his ſolar Tables; and it is moſt probable that with the ſame he ſettled his Table of Refractions at the End of his ſolar Tables; the Agreement of this Table with Dr. Bradley's, ſee Page 2d of requiſite Tables, (being both ſuited to the ſame Temperature of the Air) is ſo great, that they ſeem rather like One and the ſame than Two different Tables.

The Time of the Sun's Semidiameter paſſing the Meridian, ſerves to reduce an Obſervation of a Tranſit of the preceding or ſubſequent Limb over the Meridian to that of the Centre, when only One was obſerved. It ſignifies a Portion of apparent Time, or even mean Time, the Difference being abſolutely inſenſible upon ſo ſmall an Interval. It is found thus: Increaſe the Sun's Semidiameter in the Ratio of the Coſine of his Declination to the Radius, to find his Semidiameter in right Aſcenſion, which turned into Time at the Rate of 1′. to 15′. and 1″. to 15″. gives the

Time required. The Sun's Semidiameter in right Aſcenſion is readily found by adding the Log. Coſine of his Declination to the logiſtic Logarithm of his Semidiameter, the Sum is the logiſtic Logarithm of his Semidiameter in right Aſcenſion; which divided by 15 gives the Time of his Semidiameter paſſing the Meridian. If the Clock by which the Obſervation is made be regulated according to ſidereal Time, this Quantity muſt be increaſed in the Ratio of 365 to 366, if great Preciſion is required.

From the Time of the Sun's Semidiameter paſſing the Meridian may be alſo found the Time of its paſſing the horizontal or vertical Wire of a Quadrant or Sextant, which on ſome Occaſions may have its Uſe.—The hourly Motion of the Sun is uſeful in computing ſolar and lunar Eclipſes; alſo in correcting the aſſumed Longitude of the Ship, in order to find the Time from an Obſervation of the Diſtance of the Moon from the Sun, independant of the Diſtances contained in the nautical Ephemeris; See Britiſh Mariner's Guide, Page 49, and Table at the End of the ſame, Page 25, which is alſo copied at Page 14 of requiſite Tables. The Logarithm of the Sun's Diſtance is uſeful in the Calculation of the Places of the Planets and Comets. The Place of the Moon's Node ſignifies its mean Longitude, and is neceſſary for finding the Equation of the equinoctial Points both in Longitude and right Aſcenſion, the Equation of the Obliquity of the Ecliptic, and the Deviations of the fixed Stars in right Aſcenſion and Declination.

The Eclipſes of Jupiter's Satellites are well known to afford the readieſt, and for general Practice the beſt Method of ſettling the Longitudes of Places at Land; and it is by their Means principally that Geography has been ſo much reformed within a Century paſt, and the Poſition of the moſt diſtant Places determined to equal Accuracy with the neareſt. It was hoped that ſome Means might be found of uſing proper Teleſcopes on Shipboard to obſerve theſe Eclipſes, and could this be effected, it would be of great Service in aſcertaining the Longitude of a Ship from Time to Time. In my Voyage to Barbadoes under the Direction of the Commiſſioners of Longitude, I made a full Trial of the late Mr. Irwin's Marine Chair propoſed for this Purpoſe, but found it totally impracticable to derive any Advantage from the Uſe of it; and, conſidering the great Power requiſite in a Teleſcope for making theſe Obſervations well, and the Violence as well as

Irregularities of the Motion of a Ship, I am afraid the complete Management of a Teleſcope on Shipboard will always remain among the Deſiderata. However, I would not be underſtood to mean to diſcourage any Attempt founded upon good Principles to get over this Difficulty.

The Teleſcopes proper for obſerving the Eclipſes of Jupiter's Satellites, are common refracting Teleſcopes, from 15 to 20 Feet, reflecting Teleſcopes of 18 Inches or Two Feet, and Teleſcopes of Mr. Dollond's Conſtruction with Two Object Glaſſes from Five to 10 Feet; or, which are ſtill more convenient, thoſe of 3½ Feet, which he has lately found a Method of conſtructing with Three Object Glaſſes, which are as manageable as reflecting Teleſcopes, and perform as much as thoſe which he makes of 10 Feet with Two Object Glaſſes.

The Eclipſes of Jupiter's Satellites are obſerved by Aſtronomers at Land, as well in order to provide Materials for improving the Theories and Tables of their Motions, as for the ſake of Compariſon with the correſponding Obſervations which may be made by Perſons in different Parts of the Globe, whereby the Longitude of ſuch Places will be accurately aſcertained. It is indeed to be lamented that Perſons who viſit diſtant Countries are not more diligent to multiply Obſervations of this Kind, for want of which, the Obſervations made by Aſtronomers on Shore loſe Half their Uſe, and the Improvement of Geography ſeems to be at a Stand. But it is to be hoped that an Emulation will ſpring up among thoſe who may have Opportunities of rendering ſo uſeful a Service to the Public, to incite them to watch diligently for the Occaſions of obſerving theſe Eclipſes carefully, particularly of the Firſt and Second, which are moſt exact for the Purpoſe. The Eclipſes carefully calculated and ſet down in the Ephemeris, will ſerve to advertiſe them and Obſervers in general of the Times when they ſhould attend to theſe Obſervations. The Perſon who ſhall be under any Meridian different from Greenwich, muſt turn his Difference of Longitude into Time: See Table Page 6, 7, and 8, and add it to or ſubſtract it from the Time of the Eclipſe ſet down in the Ephemeris, according as he is to the Eaſt or Weſt of Greenwich, to find the apparent Time at which the Eclipſe will happen at his Meridian, nearly. He muſt further take care to regulate his Watch or Clock by apparent Time, or at leaſt to know the Difference, as well in order to appriſe him of the Time to look out for

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the Eclipſe, as for aſcertaining the apparent Time exactly at which he ſhall obſerve it. Equal Altitudes of the Sun or Stars taken with an aſtronomical Quadrant afford the beſt Means of regulating Clocks and Watches for occaſional Obſervations; or they may be taken with a Hadley's Quadrant, by Reflection from a Baſon of Water or Quickſilver, or from the Horizon of the Sea, if the Obſerver has an open Proſpect, and is not elevated above 5 or 600 Feet above the Level of the Sea. But, if Opportunity does not admit of taking equal Altitudes, the Time may be determined from One Altitude taken in any of the Methods above mentioned, at leaſt Two or Three Points of the Compaſs diſtant from the Meridian, but the nearer to the Eaſt or Weſt the better, the Latitude of the Place being known, or being found by Obſervations of the Meridian Altitude of the Sun or Stars made on Purpoſe. It will be better to take ſeveral Altitudes in order to take a Mean of the Reſults for greater Certainty. The Manner of computing the apparent Time from the Altitude of the Sun or a Star, will be obſerved when we come to treat of the Method of finding the Longitude by the Obſervations of the Diſtance of the Moon from the Sun and Stars by the Help of the Ephemeris.

The Obſerver being in a Place whoſe Longitude is well known, ſhould be ſettled at his Teleſcope Three Minutes before the expected Time of an Immerſion of the firſt Satellite; Six or Eight Minutes before that of the ſecond and third Satellites; and a Quarter of an Hour or more before that of the fourth Satellite; chiefly on Account of the Uncertainty of their Theories; but, if the Longitude of the Place is very uncertain, he muſt begin to look out for the Eclipſe proportionably ſooner: Thus if the Longitude of the Place is uncertain to 30 Degrees, anſwering to 12 Minutes of Time, he ought to fix himſelf to his Teleſcope 12 Minutes ſooner than is mentioned above. Nevertheleſs when he has obſerved One Eclipſe of any Satellite, and thereby found the Error of the Tables, he may allow the ſame Correction to the Calculations of the Ephemeris for ſeveral Months, which will advertiſe him very nearly of the Time of expecting the Eclipſes of the ſame Satellite, and diſpenſe with his attending ſo long.

The Immerſions ſignify the Inſtant of the Diſappearance of the Satellite by entering into the Shadow of Jupiter; and the Emerſions ſignify the firſt Inſtant of its Appearance at coming out of the ſame. They generally happen when the Satellite is at ſome Diſtance from the Body of Jupiter, except near the Oppoſition of Jupiter to the Sun, when the Satellite approaches nearer to his Body. Before the Oppoſition of Jupiter to the Sun the Immerſions and Emerſions happen on the Weſt Side of Jupiter, and after the Oppoſition on the Eaſt Side; but if an aſtronomical Teleſcope be uſed, which reverſes Objects, the Appearances will be directly the contrary. Before the Oppoſition, the Immerſions only of the firſt Satellite are viſible; and after the Oppoſition, the Emerſions only. The ſame is generally the Caſe with reſpect to the ſecond Satellite; both the Phænomena of the ſame Eclipſe are frequently obſerveable in the Two outer Satellites. The Immerſions and Emerſions marked with an Aſteriſk in the Ephemeris are thoſe viſible at Greenwich.

To know if an Eclipſe will be viſible in any Place, find if Jupiter is 8°, or 10°. above the Horizon of the Place, and the Sun as much below it. This may be done near enough by a celeſtial Globe: Otherwiſe, the Time of the Sun's Riſing and Setting may be found for any Latitude by a Table of ſemidiurnal Arcs, contained in the popular Book called the Mariner's Compaſs Rectified, and many other Books; the Time of Jupiter's Riſing and Setting may alſo be found from the Time of his paſſing the Meridian and Declination ſet down in the Ephemeris, with the Help of the ſame Table of ſemidiurnal Arcs; adding or ſubſtracting the ſemidiurnal Arc anſwering to the ſame Declination of the Sun: Remembering always that if Jupiter's Declination and the Latitude of the Place are of the ſame Denomination, the ſemidiurnal Arc will be more than Six Hours, and if they are of contrary Denominations, it will be leſs than Six Hours.

The Immerſion or Emerſion of any Satellite being carefully obſerved in any Place according to apparent Time, the Longitude from Greenwich is found immediately by taking the Difference of the Obſervation from the correſponding Time ſhewn in the Ephemeris, which muſt be turned into Degrees, *&c.* by Table Page 6, 7, and 8; and will be Eaſt or Weſt of Greenwich, as the Time obſerved is more or leſs than that of the Ephemeris.

Example: Suppoſe an Emerſion of the firſt Satellite ſhould be obſerved at the Cape of Good-Hope, May 9, 1767, at 10h. 46′, 45″. apparent Time: The Time by the Ephemeris being

being $9^{h}. 33'. 12''$. the Difference is $1^{h}. 13'. 33''$. whence by Table Page, 6, 7, and 8, the Longitude of the Cape ſhould be $18°. 23' 15''$. Eaſt of Greenwich, becauſe the Time ſuppoſed to be obſerved at the Cape is more than that of the Ephemeris.

It may not be uſeleſs here to obſerve that the Longitude of the Cape of Good Hope $1^{h}. 13'. 33''=18°. 23'. 15''$. ſet down in the Britiſh Mariner's Guide, is that of the Town; the Latitude alſo belongs to the ſame; being both determined from the Obſervations of Meſſrs. Maſon and Dixon, who went thither under the Direction of the Royal Society, and obſerved the Tranſit of Venus in the Year 1761. Hence, by the Help of the Charts, I find the Longitude of the Cape Point or Promontory $18°. 45'$. Eaſt of Greenwich, and its Latitude $34°. 30'$. S. the Longitude of Cape Falſo, $19°. 15'$. E. and its Latitude $34°. 34'$ S. If theſe Determinations of the Situations of the Cape Point and Cape Falſo are in any reſpect uncertain, it ariſes from the Imperfection of the Charts I was obliged to make uſe of, in reducing the Longitude and Latitude from the Cape Town to the Two mentioned Points: For from the near Agreement of the Abbeé de la Caille's Obſervations with thoſe of Meſſrs. Maſon and Dixon, it is probable that the Situation of few Places is better determined than that of the Cape Town: But if any one has Poſſeſſion of any Manuſcript or printed Charts of theſe Parts that he thinks may be depended upon, or has any Opportunity of determining the Points in Queſtion relatively to each other from the Compariſon of ſeveral Journals of Ships, he may perhaps fix theſe Places with more Certainty than is here pretended to.

It is to be obſerved that a correſpondent Obſervation of an Eclipſe of a Satellite of Jupiter, made under a well known Meridian, is to be preferred to the Calculations of the Ephemeris for comparing with an Obſervation made in a Meridian whoſe Longitude is required; but if no correſponding Obſervation can be obtained, as is frequently the Caſe, it will be beſt to find what Correction the Calculations of the Ephemeris require by the neareſt Obſervations to the given Time that can be obtained; which Correction applied to the Calculation of the given Eclipſe in the Ephemeris, renders it almoſt equivalent to an actual Obſervation.

The Longitudes and Latitudes of the Planets, Page 4, ſerve to know where to look for them in the Heavens, and when their Places may be conveniently ſettled by comparing them with fixed Stars by the Help of a Micrometer in a Teleſcope. They alſo ſhew when they are in the moſt important Points of their Orbits, where it is moſt material to obſerve them. They alſo ſerve to enable Perſons leſs ſkilled to diſtinguiſh them from the fixed Stars. Their Declinations and apparent Time of paſſing the Meridian are particulary uſeful to Aſtronomers who are furniſhed with Quadrants and Tranſit Inſtruments well fixed in the Meridian, in ſetting their Inſtruments for obſerving their right Aſcenſions and Declinations.

The apparent Time of a Planet's paſſing the Meridian may be computed thus; the Planet's right Aſcenſion being calculated from its Longitude and Latitude, and turned into Time, ſubſtract the Sun's right Aſcenſion at Noon in Time from it, to find the Time of the Planet's paſſing the Meridian nearly, which call T; take the Difference of the ⊙ and Planets daily Variations in right Aſcenſion in Time; if the Planet is progreſſive in right Aſcenſion, or the Sum if it is retrograde, which call X; then ſay, by the Rule of Proportion;

As $24^{h.} \mp X : T :: X : e$ and $T \pm$ will be the correct Time of the Planet's paſſing the Meridian. The upper Signs are to be uſed both to X and e if the Planet's progreſſive Motion in right Aſcenſion be greater than that of the Sun; in any other Caſe the lower Signs are to be made uſe of.

But perhaps it may be found more readily by continual Approximation as follows: Take the proportional Part of the Difference or Sum of the ⊙ and Planet's daily Motion in right Aſcenſion, anſwering to the Time of the Planet's paſſing the Meridian, found nearly, in Proportion to 24^h. and take a further like proportional Part of this proportional Part; and again of this laſt, and ſo on as far as is neceſſary. The Sum of all theſe proportional Parts added to the Time of the Planet's paſſing the Meridian found nearly, if the Planet's progreſſive Motion in right Aſcenſion is greater than that of the Sun, otherwiſe ſubſtracted, gives the apparent Time of the Planet's paſſing the Meridian.

Example: Let it be required to find the Time of the Moon's paſſing the Meridian, July 1 1767.

The Sun's right Aſcenſion in Time July 1ſt is, $6^h. 40'. 25''.$ and July 2d, $6^h. 44'. 33''.$ by the Ephemeris. Therefore his daily Motion in right Aſcenſion is $4'. 8''.$ The Moon's right Aſcenſion July 1ſt at Noon by the Ephemeris, is $159^\circ. 2'.$ anſwering to $10^h. 36'. 8''.$ of Time, and July 2d is, $169^\circ. 39'.$ an-

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ſwering to 10^h. 18′. 36″. The Difference is, 42′. 28″. of Time, from which 4′. 8″. being ſubſtracted leaves 38′. 20″. Subſtract 6^h. 40′ 25″. the Sun's right Aſcenſion July 1ſt, at Noon from 10^h. 36′. 8″, the Moon's right Aſcenſion the ſame Noon, the Remainder 3^h. 55′. 43″. is the Approximate Time of the Moon's paſſing the Meridian. The proportional Part of 38′. 20″ anſwering to this, is 6′. 17″ and the proportional Part of 6′. 17″. is 9″; therefore 6′. 17″ and 9″ or 6′. 26″ added to 3^h. 55′. 43″ give 4^h. 2′. 9″, the apparent Time of the Moon's paſſing the Meridian. In the Ephemeris it is 4^h. 2′. It may alſo be computed by taking the Difference of the Moon's right Aſcenſions at Noon and Midnight, but then half the Sun's daily Variation in right Aſcenſion muſt be made uſe of, and Proportion muſt be made for 12 inſtead of 24 Hours: And if the Moon paſſed the Meridian after Midnight, the Sun's right Aſcenſion at Midnight muſt be uſed, which is a Mean between his right Aſcenſions on the preceding and ſubſequent Noon. For the Planet's, it will be ſufficient to take the firſt proportional Part only.

The Configurations of Jupiter's Satellites, Page 5, exhibit the apparent Poſitions of the Satellites with reſpect to each other, and to Jupiter at ſuch an Hour of the Evening or Night as they are moſt likely to be obſerved, and ſerve to diſtinguiſh the Satellites from one another. Jupiter is diſtinguiſhed by the Mark ⊙, and the Satellites by Points with Figures annexed, the Figure 1 ſignifying the firſt Satellite, 2 the ſecond Satellite, *&c.* When the Satellite is approaching towards Jupiter, the Figure is put between Jupiter and the Point; and when the Satellite is receding from Jupiter, the Figure is put on the other Side of the Point. The Satellites are in the ſuperior Parts of their Orbits, or furtheſt from the Earth, when they are marked to the right Hand or Weſt of Jupiter approaching him; or to the left Hand or Eaſt of Jupiter receding from him; but are in the inferior Part of their Orbits, or neareſt to the Earth, when they are marked to the right Hand or Weſt of Jupiter receding from him, or to the left or Eaſt of Jupiter approaching him. The Cypher o ſometimes annexed to the Figure of the Satellite towards the Margin, ſignifies that it is inviſible on the Face of Jupiter; and the black Mark ●, ſignifies that it is inviſible, being eclipſed in Jupiter's Shadow, or behind Jupiter, and eclipſed by his Body.

The 7th and 5 following Pages of each Month contain the Moon's Place, and all the Circumſtances relating to her Motions,

tions, and her Diſtances from the Sun and proper Stars, from which her Diſtance ſhould be obſerved for finding the Longitude at Sea. The Longitudes, Latitudes, and Declinations of the Moon, and Time of her paſſing the Meridian, afford the like Uſes with the ſame Circumſtances of the Planetary Motions, and many more beſides. For the ſake of greater Preciſion, the Moon's Longitude, Latitude, Right Aſcenſion, Declination, Semidiameter, horizontal Parallax, with its logiſtic or proportional Logarithm, are computed twice a Day, to Noon and Midnight, and may readily be inferred to any intermediate Time with the greateſt Exactneſs.

Example: Let it be required to find the Moon's Longitude and Latitude, *&c.* July 16, 1767, at 16^{h}. 22′ 16″. Firſt to find the Longitude. The Moon's Longitude, July 16, at 12^{h}. is 0^{s}. 6°. 40′. 25″. and July 17 at Noon, 0^{s}. 13°. 47′. 48″. the Difference 7°. 7′. 23″. is the Moon's Motion in 12 Hours; ſay then, by the Rule of Proportion,

As 12^{h}. is to 4^{h}. 22′. 16″. (the Exceſs of 16^{h}. 22′. 16″. above 12^{h}.) ſo is 7°. 7′. 23″. to 2°. 35′. 41″. which added to 0^{s}. 6°. 40′. 25″. the Moon's Longitude at 12^{h}. gives 0^{s}. 9°. 16′. 6″, the Moon's Longitude nearly; but this muſt be corrected on Account of the Moon's unequal Motion in 12 Hours, by Page 11 of requiſite Tables; for this Purpoſe take out of the Ephemeris the Two Longitudes of the Moon next preceding the given Time, and the Longitudes immediately following it, and ſet them down in Order one after another, as follows.

		1ſt Diff.	2d. Diff.
	s ° ′ ″	° ′ ″	′ ″
July 16, Noon	11. 29. 29. 34.		
Midnight	0. 6. 40. 58.	7. 10 51.	3. 28.
17, Noon	0. 13. 47. 24.	7. 7. 23.	3. 44.
Midnight	0. 20. 51. 27.	7. 3. 39.	

Take their Differences, 7°. 10′. 51″. 7°. 7′. 23″. 7°. 3′. 39″. take the Differences of theſe Differences, or the 2d Differences, 3′. 28″. 3′. 44″. and take their Mean which is 3′. 36″. Now look for the Correction in Page 11 of requiſite Tables anſwering to 4^{h}. 22′ after Midnight, found on the Side, and 3′ 36″ at Top, 21″ will be found under 3′. and 28″. under 4′. the the Difference is 7″. whence 36″ will require 4″, and the Correction ſought is 21″+4″=25″. which, according to the Remark at the Bottom of the Table, muſt be added (becauſe

cauſe the Motion in 12 Hours or firſt Differences are decreaſing to $0^{s}.\ 9^{\circ}.\ 16'.\ 6''$. the Moon's Longitude found by even Proportion; whence the Moon's true Longitude is $0^{s}.\ 9^{\circ}.\ 16'.\ 31''$. and is as correct as the Longitudes from which it is deduced.

N. B. If the firſt Differences of the Four Longitudes of the Moon taken out firſt increaſe and then decreaſe, or, vice verſâ, firſt decreaſe and then increaſe, take half the Difference of the Two ſecond Differences for the Mean ſecond Difference, with which take the Correction from Page 11, and add or ſubſtract it as the 1ſt. firſt Difference is greater or leſs than the third firſt Difference.

To find the Moon's Latitude. Take out of the Ephemeris the Two Latitudes preceding and Two following the given Time, and ſet them down in Order, and take their firſt and ſecond Differences, and the mean of the Two ſecond Differences; find the proportional Part of the Middle firſt Difference anſwering to the Hours and Minutes, &c. of the given Time after Noon or Midnight; which correct in the following Manner: Entering Table Page 11 with the Hour from Noon or Midnight on the Side, and the mean ſecond Difference at Top, take out the correſponding Number of Seconds, which added to or ſubſtracted from the proportional Part found above, according as the Motion in 12 Hours or firſt Differences are decreaſing or increaſing; or, more generally, according as 1ſt firſt Difference is greater or leſs than third firſt Difference, gives the proportional Part corrected; which now added to or ſubſtracted from the Moon's Latitude at the preceding Noon or Midnight, as the Latitude in theſe 12 Hours is increaſing or decreaſing, gives the Moon's Latitude correct.

Example: The Moon's Latitude is required, July 16, 16^{h}. 22′. 16″.

	☽'s Lat. by the Ephem.	1ſt Dif.	2d Dif.	Mean of 2d Dif.
	°. ′. ″.	′. ″.	′. ″.	′. ″.
July 16. Noon	4 31 10 N.	18 26		
Midnight	4 49 36	13 50	4 36	4 40
17 Noon	5 3 26	9 6	4 44	
Midnight	5 12 32			

The Moon's Latitude July 16 at Midnight being 4°. 4 36''. N. and the Motion in the next 12 Hours being 13'. 50''. ſay by Proportion;

As 12^{h}. is to 4^{h}. 22'. 16''. ſo is 13'. 50''. to 5'. 2''; but this muſt be corrected by adding 33''. the Correction from Page 11, anſwering to the Hour 4^{h}. 22'. and the Mean Second Difference 4' 40'', becauſe the firſt Differences are decreaſing, or rather becauſe the firſt of them 18'. 26''. is greater than the laſt of them 9'. 6''. therefore the proportional Part corrected is 5'. 2''.+33''=5'. 35'', which added to 4°. 49'. 36''. gives 4°. 55' 11''. N. the Moon's Latitude correct.

Remarks on ſome Circumſtances neceſſary to be attended to, in order to obtain and apply the Correction of ſecond Differences rightly in computing the Moon's Latitude.

I. If the Moon's Latitude taken out of the Ephemeris for Noon and Midnight changes its Denomination from North to South or from South to North, the Sum of the Two Latitudes of contrary Denominations, where the Change happens, is to be accounted the firſt Difference in that Place.

II. If the Three firſt Differences firſt increaſe and then decreaſe, or vice verſa, firſt decreaſe and then increaſe, Half the Difference of the Two ſecond Differences is to be taken for the mean ſecond Difference.

III. If the Series of Four Latitndes taken out ſhould firſt increaſe and then decreaſe about the Moon's greateſt Latitudes, take the Sum of the Two firſt Differences ſtanding on each Side of the greateſt Latitude for the ſecond Difference in that Place; correct the Moon's Latitude at Noon or Midnight by the ſimple proportional Part firſt found; and to the Latitude ſo corrected, add always in this Caſe the Correction from Table Page 11, anſwering to the Mean of the Two ſecond Differences.

Before I quit this Subject of Interpolation by ſecond Differences, I ſhall point out another Method, by which the ſame End may be obtained more readily, and with fewer Rules, by thoſe who are well acquainted with algebraical Subſtraction and Addition, and the Manner of applying the Signs in thoſe Operations. Subſtract each Latitude from the following for the firſt Differences, to which prefix the Sign — if the Latitudes decreaſe; and ſubſtract each firſt Difference, thus found, from the following one of the ſame Order for the ſecond Differences. Half the Sum of the Two ſecond Differences

ferences ſtanding on each Side of the Interval to be interpolated, is to be accounted the mean ſecond Difference; the Correction correſponding to it by Table Page 11, is to be applied always with the contrary Sign.

Theſe Operations are to be performed, and the Signs to be applied as in algebraic Subſtraction and Addition. Note further, if the Four given Latitudes change their Denomination, call the ſecond Latitude +, and thoſe of a contrary Denomination —.

The Moon's Declination may be found at any Hour in the ſame Manner as her Latitude; but as the Correction ariſing from ſecond Differences will never exceed $2\frac{1}{2}'$, this may be neglected on moſt Occaſions: but if any one is deſirous to obtain the Declination true to a Minute, the Correction is eaſily applied, as ſhewn above.

The other Articles of Page 7, and 8, *viz.* the Moon's right Aſcenſion, her Semidiameter, horizontal Parallax, with its Logarithm, and the Diſtances contained in the Four laſt Pages of the Month, may be all found correctly by even Proportion, without requiring any Allowance on Account of ſecond Differences. The proportional Part of the Moon's Longitude, *&c.* for any Hour, may be found very readily by the Help of the Table of proportional Logarithms at the End of the requiſite Tables: For which conſult the Explanation of thoſe Tables.

The Moon's Longitude and Latitude are uſed in computing her Diſtances from the Sun and Stars contained in the Four laſt Pages of the Month, as well as in the Appulſes to Stars pointed out in Page 1, and, jointly with her Parallax and Semidiameter, are neceſſary for computing the Eclipſes of the Sun and Moon, and the Occultations of fixed Stars and Planets by the Moon. They alſo facilitate the Calculation of the Longitude of any Place from an Eclipſe of the Sun, or an Occultation of a Star or Planet by the Moon obſerved: Or, if the Meridian be well known, the Parallax and Semidiameter ſerve to deduce the Moon's true Place in the Heavens from the Obſervation, which compared with that given by the Ephemeris ſhews the Error of the Tables, whatever it be at that Time. The Moon's Semidiameter and Parallax are applied in correcting almoſt all Obſervations of the Moon. The logiſtic Logarithms of the Moon's Parallax, ſerve further to facilitate the Calculations of Parallaxes, but if the Table of proportional Logarithms at the End of the requiſite Tables be made uſe, of, which will be moſt convenient; the conſtant Quantity 0.4771 muſt be added to the logiſtic Logarithms of the Moon's horizontal Parallax contained in the Ephemeris of 1767, to reduce them to proportional Logarithms. It will be more convenient to ſubſtitute proportional Logarithms of the Moon's Parallax inſtead of the logiſtic Logarithms in a future Ephemeris.

The Moon's right Aſcenſion and Declination are uſeful to compute her Altitude at any Time, particularly at the Obſervation of her Diſtance from the Sun or a Star, ſuppoſing it was neglected to be or could not be obſerved properly; which latter Caſe may ſometimes happen in the Night, though I think but rarely; the utmoſt Accuracy not being required for the Calculations of Refraction and Parallax. See Britiſh Mariner's Guide. Page 57. The Moon's Declination, with her Semidiameter and Parallax, ſerve for finding the Latitude by the Meridian Altitude of her upper or lower Limb obſerved at Sea. See Britiſh Mariner's Guide, Page 93. The Moon's right Aſcenſion and Declination ſerve alſo to compute the Time from her Altitude obſerved at the Obſervation of her Diſtance from a Star; whence the Longitude may be inferred, though no Altitude of the Sun or a Star was taken for regulating the Time. See Britiſh Mariner's Guide, Page 61.

The Diſtances of the Moon from the Sun and fixed Stars, contained in the Four laſt Pages of the Month, are ſet down to every Three Hours of Apparent Time by the Meridian of Greenwich, and are deſigned to relieve the Mariner from the Neceſſity of a Calculation, which he might think prolix and troubleſome, and to enable him, when compared with the ſame Diſtances obſerved carefully at Sea, to infer his Longitude readily and with little Danger of Miſtake to a Degree of Exactneſs that may be thought ſufficient for moſt nautical Purpoſes. But uſeful and valuable as the Practice of this Method may be at preſent, it is a Remark not unworthy our Notice, that there is Room to hope, by future Improvements of the lunar Tables, and the Introduction of a more accurate Method of conſtructing Inſtruments, it may be carried to a much higher Degree of Perfection.

The Moon's Diſtance are computed both from the Sun and proper Stars, and generally from One Object on each Side of her, to afford the Mariner a greater Number of Opportunities of Obſervation, and a Means of attaining a greater Degree of Exactneſs. The Diſtances from the Sun

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are computed between 40° and 120° of Diſtance. While the Moon is between the Diſtances of 20° and 40° from the Sun, her Diſtance is computed only from a Star on the contrary Side that the Sun is. When ſhe is between the Diſtances of 40° and 90° from the Sun, her Diſtance is computed both from the Sun and from a Star on the contrary Side to the Sun; when the Moon is above 90° from the Sun her Diſtance is computed from Two Stars, one on each Side of her; though ſtill her Diſtance is computed alſo from the Sun from 90° to 120°. Though the Diſtance of the Moon from the Sun or Star, well obſerved with a good Inſtrument, is ſufficient to determine the Longitude, with the Help of the Ephemeris, always within a Degree, and generally much nearer, yet it will conduce to ſtill greater Accuracy, if the Obſerver takes the Diſtance of the Moon from Two Stars, or the Sun and a Star, or, when the Moon is between 90 and 120° Diſtance from the Sun, from the Sun and Two Stars, if he can be ſo lucky as to obtain theſe ſeveral Obſervations.

The Longitude being computed from the Obſervations made with each Star reſpectively, the Mean of the Reſults is to be taken as probably approaching neareſt to the true Longitude. In particular the Moon's Diſtance ſhould be taken from Two Stars, or the Sun and a Star on each Side of her, as often as Opportunity permits, ſince the Mean of the Reſults will probably be at leaſt as exact again as either ſeparately, I mean as far as depends on any Imperfection of the Inſtruments, and unavoidable ſmall Errors ariſing in the Uſe of them; Errors of theſe Kinds having a natural tendency to correct each other; for that ſmall Error which ariſes from the lunar Tables will affect the Reſult from either Star equally. But the Error of Mr. Mayer's laſt lunar Tables here made uſe of, ſcarce ever exceeding 1′ at the moſt, and ſeldom amounting to 20″. the Uncertainty hence ariſing in the Determination of the Longitude can ſcarcely exceed half a Degree, and generally will not exceed 10 Miles.

The Diſtances ſet down in the Ephemeris, afford the Obſerver a ready Means of knowing the Star from which the Moon's Diſtance is to be obſerved; for he has nothing to do but to ſet his Quadrant to the Diſtance computed roughly from the Ephemeris, neglecting the Seconds, at the apparent Time eſtimated nearly by the Meridian of Greenwich; and direct his Sight to the Eaſt or Weſt of the Moon, according as the Diſtance at Greenwich is found in Page 9 and

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10, or in Two laſt Pages of the Month; and having found the Moon upon the little Speculum, let him give a Sweep with the Quadrant to the Right and Left, and he will find the Star he ſeeks for, if above the Horizon and the Air be clear, nearly in a Line perpendicular to the Line of the Moon's Horns or longer Axis, or, which is the ſame Thing, in the Line of the Moon's ſhorter Axis produced. The Star is always one of the brighteſt, ſo that there is little Danger of miſtaking another for it, if the preceding Directions are carefully obſerved. The Time at Greenwich is eſtimated nearly by turning the ſuppoſed Longitude from Greenwich into Time, by Table Page 6, 7, and 8, and adding it to or ſubſtracting it from the Apparent Time at the Ship, as its Longitude is Weſt or Eaſt of Greenwich. It will be ſufficient if the Diſtance be computed from the Ephemeris within 10′. or 20′. for ſetting the Quadrant. The principal Uſe of the Diſtances of the Moon from the Sun and fixed Stars; namely, in determining the Longitude by Compariſon with the correſponding Diſtances obſerved at Sea, will be ſhewn hereafter in its proper Order, in the Diſſertation explaining the Method of computing the Longitude at Sea by the Help of the Ephemeris.

The Diſtances contained in the Ephemeris were computed ſtrictly to Noon and Midnight, and thence interpolated for every Three Hours, according to the Method ſhewn for computing the Moon's Latitude, Page 17—19: Except that the Correction of ſecond Differences at the Middle of the Interval to be interpolated, was taken $\frac{1}{8}$ of the Mean of the Two ſecond Differences, and at the firſt and third Quarter of the Interval was taken $\frac{3}{4}$ of the Correction juſt found at the Middle of the Interval; inſtead of conſulting Table Page 11, which would however have given the ſame Reſult. But, at the firſt 12 Hours when the Diſtances of the Moon from a Star begin, and the laſt 12 Hours when the Diſtances end, there being only One ſecond Difference inſtead of Two ſecond Differences on each Side to take a Mean of, this Method fails in theſe Caſes, and therefore the following is to be ſubſtituted in its ſtead, being derived from Sir Iſaac Newton's Solution of the Problem of drawing a Curve through the Extremities of any Number of given Ordinates. Phil. Nat. Princ. Math. Page 486. Edit. ult.

From Four Diſtances at Noon and Midnight computed ſtrictly, to interpolate Three Diſtances at the 3d, 6th, and 9th Hour of the firſt or laſt Interval.

Subſtra

Subſtract each Diſtance from the following, for the firſt Differences, and prefix the Sign —, if the Diſtances decreaſe. Subſtract each firſt Difference thus found from the following one of the ſame Order, for the ſecond Differences: And in like Manner ſubſtract the firſt 2d Difference from the following for the third Difference; applying the Signs as in algebraic Subſtraction. Denote the firſt or laſt firſt Difference by *b*, the firſt or laſt ſecond Difference by *c*; according as the Interpolation to be made is for the firſt or laſt 12 Hours, denote alſo the third Difference by *d*; and, *a* being put to ſignify the Diſtance at the Beginning of the Interval, the interpolated Diſtances will be as follows:

At 3d Hour of firſt Interval	$a + \frac{1}{4} b - \frac{3}{32} c + \frac{7}{128} d$
At 6th Hour of firſt Interval	$a + \frac{1}{2} b - \frac{1}{8} c + \frac{1}{16} d$
At 9th Hour of firſt Interval	$a + \frac{3}{4} b - \frac{3}{32} c + \frac{5}{128} d$
Or	
At 3d Hour of laſt Interval	$a + \frac{1}{4} b - \frac{3}{32} c - \frac{5}{128} d$
At 6th Hour of laſt Interval	$a + \frac{1}{2} b - \frac{1}{8} c - \frac{1}{16} d$
At 9th Hour of laſt Interval	$a + \frac{3}{4} b - \frac{3}{32} c - \frac{7}{128} d$

In adapting theſe Formulæ to Numbers, great Care muſt be taken about the right Application of the Signs. Thus if *b*, *c* or *d* is Negative, apply the Number expreſſing the Value of that Term of the Formula where it is found with a contrary Sign to that of the Formula.

Let me add in this Place, that if in filling up the firſt and laſt Intervals, a new ſecond Difference has been ſuppoſed in arithmetical Progreſſion with the Two given ones, in order to take a Mean between it and the firſt or laſt ſecond Difference, the Interpolation at the Middle of the Interval or 6th Hour will be had true, the ſame as if the above Formulæ had been uſed: But at the Interpolation of the firſt and third Quarter there will be an Error of $\frac{1}{128}$ third Difference; which will be corrected, by applying $+ \frac{1}{128} d$ or third Difference, to Number found at the firſt Quarter of the Interval, and $- \frac{1}{128} d$ to that found at the third Quarter of the Interval; equally the ſame whether it be the firſt or laſt Interval.